

RURAL INDUSTRIALISATION:

APPROACHES AND POTENTIAL

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PREFACE

Development of Industries in rural areas has featured as an element of industrial policy as well as of programmes for rural development in India, though with varying degree of emphasis from time to time, during the last three decades. But it has been primarily viewed as a programme of preservation and revitalisation of traditional rural industries, and hardly as an effort in the direction of rural industrialisation. Not only that, sometimes the development of rural industries has been projected as an antedote to industrialisation as such. As a consequence, the rural industries do not seem to have been able to play their effective role, even in providing a reasonable level of incomes to those engaged in them, much less of providing a link of the rural areas with the overall process of industrialisation in the country. A rather restrictive approach to the issue on the one hand, and general lack of information and analysis on the role and potential of different industries in the rural areas on the other, have inhibited the evolution of a rational strategy for rural industrial development.

The present study makes an attempt to examine the alternative approaches to rural industrialisation as well as to provide a framework for assessing the role and potential of different industries in the development of rural areas and industrial development of the country. For this purpose, it utilises field data collected from a sizeable sample of rural industrial units in some parts of Eastern Uttar Pradesh, besides, of course, using the arguments and evidence advanced in past research studies and publications.

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CHAPTER I

Approach to Rural Industrialisation

In a way, rural industrialisation is as much an essential ingredient of rapid and self-sustained development of rural areas, as industrialisation as such is for the development of the entire economy. One can approach the process of development on the basis of division of economic activities between the rural and urban areas so that rural areas specialise more or less exclusively in agriculture, and industries get located exclusively in the urban areas. In the situation where rural-urban, or agriculture-industry linkages are not strong and technologically and organisationally there is a wide gap between agriculture and industry, this approach has two serious shortcomings. First, the division leads to uneven development, as agriculture by itself has a tendency to grow at a slower pace than industry. Second, since industry generally yields a higher level of output per worker than agriculture, the gap in income levels between those engaged in the two sectors tends to widen. Further, the relationship between the traditional agriculture and modern industry generally has a dependency structure, thus rendering the rural sector further disadvantaged in appropriating the gains of development and increasing the disparities between rural and urban income levels¹.

¹Sigurdson, Jon, Rural Industrialisation in China, Harvard University Press, Cambridge, Mass and London, 1977, p.223.

Rural industrialisation can serve as an effective means to reduce this imbalance and accelerate the process of rural development.

Several other arguments for extending the industrialisation to rural areas are allied to the basic rationale implicit in the process of development. In economies with predominance of agriculture as a means of livelihood and dependence for the larger part of population, even a relatively rapid growth of agriculture is unlikely to employ the entire rural labour force at reasonable levels of productivity and incomes. The pressure of population on land is already high and increasing thus resulting into large surplus of labour in rural areas. Agricultural growth in such a situation has to be much higher than the growth of population so as to be able to productively employ the existing labour force, and the new additions to it, accounting also at the same time for the fact that technical progress required for achieving high rate of growth may reduce elasticity of employment to output much below unity. There does not seem to be any solution other than industrialisation to the unemployment problem in such situations.² As to why it should be 'rural' industrialisation, two specific reasons are generally advanced, besides the one given earlier, that is, it is essential for rural development. First the assumption of zero marginal productivity of labour in agriculture is not generally valid; and, therefore, permanent transfer of rural

²Yawer, Duraid, Rural Industrialisation for Developing Countries, Chetna Publications, New Delhi, 1978, p.38.

labour for work in industries in urban areas is likely to lead to loss in agricultural production. The unemployment problem of the rural areas more often manifests itself in the form of surplus labour rather than surplus workers. Second, the social cost of migration in terms of overcrowding and high maintenance cost of workers particularly in large urban areas, tends to offset much of the gains in productivity and incomes³. Therefore, the development model based on the mechanism of rural-urban population transfer loses much of its validity⁴. It is likely that technological and organisational changes in agriculture would lead to such changes in the employment and unemployment situation in agriculture, as would render a larger number of workers permanently transferable; and, a rapid growth of urban industrial sector could also be able to absorb them, but minimisation of the social cost of the larger urban agglomeration will still remain an important consideration, in favour of spatial decentralisation of industrial activity.

Another dimension of the rural situation, particularly in India, which calls for industrialisation to provide productive employment to the rural people, is the existence of a growing mass of the landless, who constitute over one-third of the

³Rao, R.V. Rural Industrialisation in India, Concept Publishing House, Delhi, 1978, p.8.

⁴Papola, T.S. 'Rural Industrialisation : Issues and Evidence' in Studies on Development of Uttar Pradesh, Giri Institute of Development Studies, 1979, pp. 136-137.

rural population. Agricultural growth benefits them only to the extent it results increase in employment and wages. If such opportunities are not forthcoming at a rapid pace, employment avenues in sectors other than agriculture, alone, can provide them with a source of livelihood.

It is, however, possible to approach rural industrialisation with varying emphasis on these different considerations, thus resulting in alternative strategies with different short and long run implications for development pattern. The orientation and contents of rural industrialisation could be different depending on the way some of the major issues, described below are sought to be approached and resolved. It must be stated at the outset that the issues have been placed here in a contrasting framework deliberately to focus on alternatives in emphasis and need not necessarily be interpreted as statements of exclusive approaches.

Locational diversification of Industries OR Development of Rural Industries

Rural industrialisation can be approached as an aspect of spatial diversification of industries, in which case it could be treated as a part of the problem of location of industries in general. It could be argued that spatial concentration of industries in large urban centres is not conducive to an equitable pattern of growth and, therefore, industries should be spatially diversified into smaller towns, backward areas and villages. In this context the significant question needing investigation would be as to how to make the industrially

backward areas including villages attractive enough for the industries to get located and to develop there. The question of locational flexibility of industries, and economies of agglomeration and scale, infrastructure, incentives and concessions would assume importance in an analysis of rural industrialisation as a part of the problem of industrial location. On the other hand, rural industrialisation could be looked upon as the problem of development of village industries⁵. Village industries predominantly in the form of traditional crafts, have productively engaged a part of the rural population for centuries. Over the years many of them seem to have languished for various reasons, decline in patronage, static technology, competition from substitutes produced in the modern urban industrial sector, and low income elasticity of demand. Yet, they form a part of the rural occupational structure and their decline leads to dislocation of a sizeable number of workers. It is believed that with very small amounts of capital investments it is possible to employ people in these crafts provided market could be assured to their products. In this approach, therefore, one can envisage rural industrialisation to consist basically of reinvigourating the traditional village industries by providing them protection and assistance.

⁵For a discussion on and implication of the alternative approaches, see Papola, T.S. and Misra, V.N. 'Some Aspects of Rural Industrialisation', Economic and Political Weekly, Special Number, October 1980, pp.1733-1746.

Both the approaches would bring the industry, employment and incomes nearer the people in the villages, but the structure of products and quantum of these variables would differ. The spatial diversification approach, seeking introduction of modern industry into the rural areas, has limitations for its application to logical conclusion of industrialising each village. For, the location of a considerable proportion of manufacturing industry directly in the villages may not be the best way to achieve the benefits of industrialisation. On the other hand, the "village industries" approach limits the scope of product diversification and inter-sectoral and spatial linkages because of its coverage limited to traditional crafts, although it delivers employment and income to a few at their house doors. The midway between the two where product structure of industries located in rural areas is well diversified to include the traditional and modern industries according to the suitability of the local conditions may be preferable. It is seen that village industries with high income elasticity of demand for their product and with possibility of vertical technological mobility, and modern industries using local material having a continuing, even though non-local, demand, perform better than traditional village industries with outmoded products with only local demand or ones which grow due to sudden spurt in demand from nearby urban areas, but use no local material⁶. In terms of location there is enough evidence to show that while diversifying industrial activity into rural

⁶Papola, op.cit. pp.173-74.

areas is highly desirable, some notion of area or cluster^a of settlements, as the catchment area for employment, or raw material, though not necessarily for market needs to be adopted. As Sigurdson observes "it is likely to be more effective to focus on the industrial development of selected towns and cities which are intermediaries between the village on the one hand, with considerable emphasis on upgrading traditional village crafts serving agriculture"⁷. In the Indian context it is considered necessary to group of villages into a cluster^a for planning rural industrialisation⁸.

Industrial Development in Rural Areas OR Rural Development

It is also sometimes argued that rural industrialisation may not lead to development of rural people if it does not serve their needs. The fear is expressed against the introduction of modern urban industries into the rural areas, which neither use local material nor serve the rural consumer demand, even though it may bring employment and incomes to such of the rural people who work in these industries as wage earners. Even though some rural industries use local material and skill, they do not produce for local consumption, and thus only are "overflow of urban consumerism, depending on growth and prosperity of the urban elite"⁹. On the other hand, even the

⁷ Sigurdson, op.cit. p.16.

⁸ Cf. Rao, V.K.R.V., 'Industrialisation and Integrated Rural Development' Man and Development, Vol. I, No.2, pp.9-20.

⁹ Behari, Bepin, Rural Industrialisation in India, Vikas Publishing House Pvt Ltd., New Delhi, 1976, p.xi.

prosperity of a few in the rural areas does not seem to create any impetus for development of rural industries. Major part of the expenditure on non-agricultural items of consumption by rural households is found to go to buy urban products¹⁰.

"There is either not enough surplus in the village, to allow industry to thrive or what surplus there is, is already largely flowing to the city"¹¹. Thus, it is argued that rapid economic development in the rural areas cannot come by taking urban industry into rural areas, but only by linking them with the basic needs of the rural people, producing major part of their forward and backward linkages within the village economy¹².

But it is also observed that "a successful rural industry may not develop many forward and backward linkages with the villages around it" and thus rural industry is found to have a limited role in rural development¹³.

These propositions lead one to seek clarification on the concept of rural development itself. Even granting the fact that development of an area does not necessarily lead to the development of people in that area, it is somewhat dangerous to

¹⁰Rao, V.K.R.V., op.cit. p.14.

¹¹Dandekar, Hemalata and Brahme, Sulabha 'Role of Rural Industries in Rural Development' in R.P. Misra and K.V. Sundaram (Ed) Rural Area Development : Perspective and Approaches, Sterling, New Delhi, 1979, p.137.

¹²Misra, P.K. 'Agro-Industrial Development and Its Implications for Rural Area' in Misra and Sundaram, op.cit. p.50.

¹³Dandekar and Brahme, op.cit. p.137.

stretch this dichotomy too far. Development of a rural area generates income and employment within that area, the wage income is mostly retained but what parts of other incomes accrue within the area depends on the nature of activity, size and structure of ownership of investment and, inter-activity terms of trade. Development through an activity producing linkages with the area is obviously likely to result in greater gains to the people there. There could be one kind of development where the area produces to fulfil most of its consumption needs, all activities are closely inter-linked and integrated but general levels of income are low. In another situation the population derives a high level of income in the form of wages or sale proceeds of their products, though they buy most of their inputs and sell most of their output outside the area. The former may be a preferable alternative in certain sense, but insistence on it may limit the scope of development beyond a point. The latter may provide greater possibilities of growth, but may tend to be inequitable both on intra and inter-area basis. No doubt, 'independent' development of rural areas would be preferable to the 'dependent' development, but the limits of development are likely to be reached rather early in an 'enclave' pattern of rural development unlinked with modern industrialisation and urban development processes.

Nevertheless, the question 'industrialisation for whom' is very legitimate and important and a kind of rural industrialisation which does not benefit the rural population, though

leads to considerable growth of industrial output, is not the best way of rural development. But whether generation of higher employment and income opportunities for the rural people, in production of commodities which they do not necessarily consume, could be considered adequate for rural development; or only such rural industrialisation as results in production of commodities meeting basic needs of the rural people, could be considered to lead to rural development, is partly a matter of value judgement and partly a function of the objective endowment situation and level of development of the area.

Dualism OR Continuum

Broadly, a kind of rural industrialisation which produces both forward and backward linkages in the same area looks a tall order in most situations. Backward linkages in the farm and allied activities are most effectively produced by agro-based industries, but the surplus that these activities produce gets mostly appropriated outside the area because their products have mostly urban demand. On the other hand, industries producing inputs for agricultural and allied production would produce forward linkages but material required for their output mostly comes from urban areas. Local skills and technology could very well be used in these industries, but modernisation of agriculture itself leads to a change in the nature and quality of inputs required. Some of the rural industries may have the necessary technological flexibility to upgrade their

products to suit these changes,¹³ but many may have, however, to break from their traditional methods and go in for techniques used by urban industry. The same applies also to the traditional rural industries which produce consumption goods either for rural or urban markets.

In this context, the question that becomes extremely relevant is whether rural industrialisation should be looked upon as a means of development bringing about increasing integration between the urban and rural areas, or it should be treated merely a method of developing rural areas without any deliberate efforts to link it up with overall process of modern industrialisation. The strategy of simultaneous development of modern urban industry and traditional rural industry - a strategy that came to be known as 'walking on two legs' in the context of industrial development in China - could be used for either integrated or dualistic industrial development. In spite of emphasis on interrelationships between sectors in the basic strategy,¹⁴ the policy on rural industrialisation in China, has made rural industrialisation basically an element in the strategy of industrial dualism and a part of the rural development strategy.¹⁵ The emergence of a dualistic structure

¹³ Cf Papola T.S. Op.cit. pp.173-74.

¹⁴ Sigurdson, op.cit. p.8-9.

¹⁵ Ibid. p.223.

is likely to be sharper in the Indian case, as the strategy has very little emphasis on industrial continuum and linkages built in it.¹⁶

The empirical situation most of the time, however, points to the fact that even for being an effective tool for rural development per se, rural industries need to be linked up and integrated with the overall industrialisation process. With rural development and rising incomes, a shift both in input structure of production and commodity structure of consumption in favour of so-called urban products is inevitable. If industries in rural areas have to take advantage of these changes their technology and product designs will have to be similar to those of the modern sector. Or then industries now operating in the urban areas can shift their location nearer the rural markets to the extent this locational shifts lead to advantages good enough to compensate for any economies of agglomeration and services that the urban areas may offer. In this model there would be no distinction between the rural and urban industry in terms of their products, but a larger part of the industry may get located in the rural areas. Dualism will disappear, but in the process the village crafts and skills will also vanish.

In between the strategy leading to a permanent industrial dualism on the one hand, and that of integration through elimination of traditional sector, there could be a strategy of

¹⁶Papola and Misra, op.cit. p.8.

integrated industrialisation recognising the interrelationships between different sectors of industry and deliberately planning to take advantage of them for accelerating the process both of industrialisation and rural development. This would involve use of different levels of techniques for production units, and different locations, depending on the nature of the product. In order that this industrial spectrum in terms of output, organisations and locations leads to increasing integration between the different sectors, it is essential that continuous improvements take place in the technology of traditional rural industries and modern consumer goods and light capital goods industries use technologies which are linked not only with advanced technology used by heavy capital industry but also with the improved traditional technology used by village industries. A programme of transfer of technology from the industries on higher points of the spectrum to the small and rural industries would also form an essential part of the integrated strategy of industrialisation.¹⁷

Technology, Employment and Productivity

One of the major dilemma faced in the programme of rural industrialisation could be in the choice of technology which maximises both employment and output per worker. To the extent

¹⁷Transfer of technology is found to have played a very important role in promoting industrialisation in China in recent years. See, Sigurdson, op.cit. p.89.

employment is put forward as the main consideration for promoting rural industrialisation, introduction of technological change which enhances capital requirements meets with disapproval on the presumption that it will raise capital intensity of employment and thus reduce employment potential. There is evidence from some field studies to the effect that augmentation of capital of the rural industrial units is essential for expanding their production, which also raises their employment potential. It is encouraging to note that increase in the size of capital leads to increase in output and employment in most rural industries. It also leads to increase in output per worker and value added per worker in many industries.¹⁸ Thus income generating potential can be increased, along with employment potential, not in terms of number of workers, but of persons days of employment of those already employed in most rural industries. It looks that additional capital does not by itself lead to change in technology, but it does generate positive scale effect with fixed proportions of capital and labour.

An upgrading of technology both to suit the emerging demand pattern and to enhance productive potential of the rural industrial units may, however, lead to increase in capital intensity, and not just the total capital. Insofar as an increase in capital requirements is per worker engaged in them though

¹⁸Papola, T.S. op.cit. pp.165-72.

not per manday of employment produced, objection to such an increase would imply accentuation of the severe underemployment and low productivity and income levels of rural industry workers. Even an increase in capital intensity per worker may have to be accepted if that is the only way of providing an adequate level of income to those employed in rural industry. The technology would have not only to be 'appropriate' in relation to the endowment of labour and other resources available in the areas, but also in relation to the specifics of the demand for its product, whether from rural or urban areas, so that it could be marketed competitively at reasonable prices and thus yields sufficient income to the producers. It would be neither in the interest of rural producers nor the national economy to continue their "aversion" to newer technologies,¹⁹ and it hardly needs to be emphasised that innovations through the application of science and technology would play an important role in improving productivity of rural industries.²⁰

Rural industrialisation needs to be looked upon not merely as a way of containing the rural workers and stopping them from migrating to urban areas, by providing them some kind of employment in the villages, but as a dynamic element in the process of raising productivity and income levels of workers in the rural areas. And it may be difficult to utilise rural industrialisation effectively for this purpose if employment as a

¹⁹Behari, Bepin op.cit. p.87.

²⁰Arora, R.C. Industry and Rural Development, S. Chand & Co., New Delhi, 1978, p.84.

static category is given supreme importance, and any change in technology is resisted for fear of reducing employment potential within a unit. Though employment is undeniably important, there is a danger in emphasising an improvement in quantity of employment, as "it may result in the creation of a host of low productivity dead-end jobs in what individuals have little opportunity for advancement".²¹ After all employment is important because it provides an income to those who have no other source of income, and employment that does not provide a minimum level of income may not be worth creating.

Primary OR Supplementary Employment

Rural industries can be viewed as independent rural activities engaging people fully or mainly, or then, as activities undertaken by agricultural households when they are not engaged in their main activity, to supplement their incomes. The nature and scale of industrial activity required for these two roles would differ. In the former case any industrial activity that can suitably be located and carried out in the rural areas would do while for the latter industries closely allied to agriculture and capable of intermittent, rather than perennial, functioning would alone be found suitable. It is a matter of empirical investigation as to which of the two kinds of industries dominate rural industrial structure. It is generally

²¹Zuvekas, Clarence, Economic Development : An Introduction, MacMillan, London 1979, p.314.

presumed that industry is only a subsidiary occupation of the rural agricultural households. This presumption, however, seems to prove increasingly doubtful. Already there is some evidence to the effect that industrial activity constitutes the sole source of livelihood for most of the households engaged in them.²² Increase in the proportion of landless population as has been evidenced recently is likely to the further emergence of this phenomenon. In that case, rural industrialisation to be an effective programme of rural development to provide productive employment to larger number of workers, would have to encompass more and more non-traditional and perennial manufacturing activities within its fold.

Mode of Production : Self-Employment OR Wage Labour

Most of the traditional village industries are carried out on a household basis, primarily using family labour and very little of hired labour. This characteristic of village industries has sometimes been put forward as a strong argument of their protection and development, because it is the best form of decentralised production and also because self-employment is the best form of employment for providing opportunities for the full development of the personality of the worker.²³ To the

²²Papola, T.S. op.cit. p.152.

²³Government of India, Report of the Village and Small Industries Committee, New Delhi, 1955, p.22 and Government of India, Intensive Area Scheme of Rural Development, KVIC, New Delhi 1958.

extent the technology, scale and marketing characteristics of the product suit decentralised production on the self-employment basis, the presumed non-economic advantages of this mode of production, would produce a convincing argument in its favour. Once, however, the producers have to look out of the village for material, technology and markets for their industries, production on household basis would become difficult to operate. Further, there are instances where proliferation of a large number of household units in the same production line in the village without arrangements for procurement of material and for marketing on an organised scale, have led to fierce competition among the producers and thus loss in production and income of all.²⁴ 4092

Technology and nature of the product could permit economical production on household basis with self-employment of family labour, provided procurement of material, technological improvements and marketing are taken care of at a higher level, for these would necessarily require organisations larger than the households to make the household industries survive and thrive. At the same time, self-employment need not be reduced to the level of a fetish and where the economic organisation and technology required for production warrants non-household operations with the use of hired labour, it could well be encouraged so long as it provides employment

²⁴ Papola, T.S. op.cit. p.161.

to rural workers at reasonable wage rates. For example, while traditional pottery due to its simple technology, small capital requirements and local market is quite suitable for household production, but once rise in income levels leads to change in demand pattern, transformation of these units into chinaware units would be difficult on the household basis for the reasons of technology, investment requirements and widening markets. Still the households may pool their resources, but a scale and mode of production other than household production would be necessary. Leaving opportunities of increasing employment and incomes unexploited because the mode of production required is 'capitalistic' would not serve the interest of either rural development or industrialisation. In any case, for most of the assetless population in the rural areas, the only way open for earning a livelihood lies in employment as wage labourers, as they neither have resources nor experience to run own enterprises. Even the programmes for assisting them to provide with some assets do not succeed due to lack of organisation for procuring inputs and marketing their products, and major part of the surplus generated by them is appropriated by those who have larger assets and organisational capacities.

Rural Industries in India's Development Programmes²⁵

The important role that rural industries can play for amelio-

²⁵For an account of the evolution of policies and programmes on rural industrialisation in India, see Bepin Behari, op.cit. R.V. Rao, op.cit., O.P. Jain, Rural Industrialisation : India's Experience and Programme of Developing Countries, New Delhi, T.S. Papola and V.N. Misra, op.cit.

rating the socio-economic conditions of the rural people has received emphasis in all the major policy pronouncements on rural development in India. The Industrial Policy Resolution of 1948 emphasised the "utilisation of local resources and achievement of local self-sufficiency in respect of certain essential consumer goods", as the most suitable characteristics of cottage and small industries. This approach was followed in the first Five Year Plan. But the development of rural industries was conceived largely in isolation of the rest of the economy.²⁶ Industrial Policy Resolution of 1956 emphasised employment creation, equitable distribution of incomes and effective mobilisation of capital and skills, as the characteristics of cottage, village and small scale industries, justifying their encouragement and development. Accordingly, the Second Plan (1956-57--1960-61) looked at rural industries to some extent, as an integral component of the national economy, forming the basis for a pyramidal industrial structure.²⁷ Further, with the formulation of 26 Pilot Industrial Projects, intended to be an exercise in area development, a spatial dimension was also added to the programme of development of rural and small industry. The approach was followed up in the Third Plan (1961-62--1965-66) with the formulation of Rural Industries Projects in 49 selected areas to promote village and small industries including

²⁶ de Haan, H.H., Rural Industrialisation in India, Discussion Paper No.53, Erasmus University, Rotterdam, Centre for Development Planning, June 1980, p.23.

²⁷ Ibid p.24.

ancillary units of large scale units in order to achieve balanced regional development. The Programme was continued during 1966-69 and also the Fourth Five Year Plan (1969-70--1971-74), when a Backward Area Development Programme was also adopted incorporating industrial development as well. The Fifth Plan broadened the Rural Industries Programme spatially to cover the entire districts except town in each Project and 100 new districts were included in the programme.

Over the period the development of rural industries has come to be regarded as an integral part of rural development, and to the extent it included small scale industry, also an element in the overall programme of industrialisation. The latter aspect was particularly focussed in the Common Production Programme, which sought to establish integration and linkages between rural and small scale industries on the one hand and large scale industries on the other.²⁸ Its elements consisted of a degree of assured market for small units and positive assistance through supply of raw material, technical guidance, training and marketing assistance. In effect the main emphasis has been on protection and reservation or demarcation of the spheres of production for different sectors. The elements which could lead to effective utilisation of the benefits likely to flow from protected market could not get an

²⁸Planning Commission, Government of India, Second Five Year Plan, New Delhi, 1956, pp.433 ff.

equal emphasis. Thus even the specialised agencies in the form of Boards and Commissions created during the period for the development of rural industries could not prove effective in reinvigorating the traditional rural industries to provide employment with increasing levels of income and form an integral part of the industrial development process. The Rural Industries Projects are also found to have only limited success, the employment generated by assisted projects and units fell far short of expectations, establishment and promotional costs were high in proportion to the assistance to actual production, assisted units had a high degree of underutilisation, and the programme did not succeed in disseminating industrial and business intelligence among people and create a congenial atmosphere for industrial development.²⁹

Thus inspite of the stated intention of making rural industrial development an integral part of rural development, on the one hand, and of the process of industrialisation on the other, besides as an effective instrument of creation of productive employment in rural areas, the rural industrial sector has remained relatively stagnant, has created very little impact on the rural scene and has remained by and large, insulated from the overall industrialisation process in the

²⁹ See for details, e.g. Reports of the Programme Evaluation Organisation of the Planning Commission on Evaluation of Rural Industries Projects, 1968 and 1978 and Working of Rural Industries Project in Rajasthan : An Evaluation Study, Evaluation Organisation, Government of Rajasthan, Jaipur, 1978.

country. In fact, if the past trends are any indicators, the traditional manufacturing sector in the rural areas is bound to disappear, inspite of all the protection and support it is provided with.³⁰ This is particularly true of the rural household sector which showed a decline of 1.6 per cent per annum in employment over 1961-1971, while the non-household rural industry experienced a growth rate of 4.1 per cent per annum. But the latter employs only 1.9 per cent of the total rural labour force while the traditional industries account for 4.4 per cent of the rural workers. It may be noted that the growth rate of employment in non-household industry was higher at 4.1 per cent in rural areas than in the urban areas (3.8 per cent). In this context if the rural industrialisation has to be stimulated, it seems necessary to reduce the absolute decline in the household sector and accelerate growth of modern small scale sector to absorb labour displaced in the household sector. The growth of non-household sector will, however, have to be higher than the rate of decline in the household sector, so as to absorb surplus labour in agriculture.³¹

The relatively poor performance of rural industrial sector to stimulate rural development and act as a link in the industrialisation process of the country, despite extensive

³⁰ de Haan, op.cit. p.4.

³¹ Ibid p.17.

programmes of protection and assistance, to a large extent, is due to a rather restrictive approach to the problem. The approach has sometimes been heavily loaded with a priori notions inhibiting the treatment of the problem with open mind. Preservation of traditional rural industries is viewed many a time as an objective in itself, without examining their likely role in the process of overall rural and national development and the changes that may be necessary in these industries to play the role. That is how 'protection' rather than development and modernisation becomes the main plank of policy and programmes on rural industries. Forced reservation as opposed to creation and effective utilisation of inter sectoral linkages is bound to fail.³² Walking on two legs in a mixed economy, with dominant private sector, is not viable in the long run,³³ particularly when the two legs compete rather than cooperate with each other.

The aspects of linkages and integration have tended to get little attention because development of 'rural' industries has received greater attention than diversification of industries into rural areas; employment has received almost an exclusive emphasis even at the cost of growth, productivity and incomes;

³²Kurien C.T. 'The Small Sector in New Industrial Policy', Economic and Political Weekly, March 4, 1978.

³³de Haan, op.cit. p.2.

emphasis on traditional skills and technology has got interpreted rather literally thus inhibiting scope of improvement in productivity to make these industries more remunerative; scare of the modern urban industry has characterised the policy thus jeopardising the positive approach of cooperation, integration and linkages; rural industries and their development have been looked upon often as a means of 'village survival' and part of the call of 'back-to-villages', rather than as an instrument of growth; and household mode of production has been overemphasised sometimes to the detriment of expansion of units and diversification of rural industrial structure. Thus rural industries have remained a marginal supplementary activities in the rural areas and an inefficient and unlinked appendage to the industrial structure of the country.

Present Study : Objectives and Scope

Besides certain strong predilections of the policy makers, another important reason which has hindered development of a rational and growth-oriented approach to rural industrialisation in India, is lack of systematic information on the structure, functioning and potential of rural industries. In the absence of such information certain presumptions have been made about the various aspects of these industries and many a time such presumptions have also been treated as holding for

different industries and different areas. For example, it is assumed that the village industries are mostly carried out as supplementary activities so that they offer and need to offer only part time employment; that the rural industrial structure is dominated by the traditional village industries and it is their development that contributes most to the integrated development of the village; that most of the time their problems consist only of competition from the urban products, their technology is capable of generating high enough physical productivity and assurance of market could enable them to have high enough value productivity to earn an increasing level of incomes; and that most of the rural industries serve and can be used to serve the local consumption needs. Strategy and programme based on these assumptions would obviously fail to stimulate growth of rural industries if the conditions are found to be different.

There are reasons and evidence to believe that the rural industrial scene is not necessarily characterised by these features. Some material relating to the industries in rural areas of Uttar Pradesh goes to refute at least some of the above propositions.³⁴ True, that around two-thirds of the rural industrial units are carried out on a household basis,

³⁴Information given in the following description is based on a survey conducted by Directorate of Economics and Statistics during 1968-69, and also used in Papola T.S. op.cit. pp. 139-49.

but most of these households have industrial activity as their sole activity. In the household sector two-thirds of the units carry out traditional manufacture based on local raw material but 15 per cent of them produce capital and intermediate goods, another 18 per cent produce consumer goods not based on local raw material. In the non-household sector, the latter two groups accounted for 53 per cent of the rural industrial employment. In the non-traditional activities in the non-household sector machinery, transport equipment, chemical products and metal products have experienced fastest rate of growth among all rural industries and are emerging as significant industries in the rural areas. In terms of other indicators of performance such as employment per unit, and personday of employment per person engaged, value added per worker, and earning per worker engaged in the non-household industry, the non-traditional products were found to be doing better than the traditional household industries.

It, therefore, seems that the assumptions underlying the official approach to rural industrialisation and programmes for industrial development of rural areas are not necessarily valid. In the absence of information and analysis, however, the policy instruments continue to be evolved and used on the basis of partially valid propositions. The purpose of the present study is to gather and analyse information relating to rural industrial units with a view to verifying

some of these propositions. The attempt made by us is inevitably limited in scope, as the data have been collected from units in a few selected blocks in Varanasi and Gorakhpur districts of Eastern Uttar Pradesh only. No doubt, our sample covers units in several industry groups, seventeen in all, in the four blocks namely, Chandauli, Niamatabad, Sevapuri and Chiraigaon in Varanasi and Sardarnagar and Sahjanawa in Gorakhpur, but the region covered is a specially backward one and has certain special characteristics of its own. Therefore, the findings may have limited validity in regions with relatively higher levels of development and different endowment. Further, the sample is not necessarily representative of the rural industrial structure, as the selection of industrial units is again purposive with a view to covering industries of diverse nature, each of which have a sizeable number of units operating in one or more blocks. The focus has been on industrial categories rather than on the area as such.

CHAPTER II

Social and Economic Base of Rural Industries

Traditionally, industrial activities in the rural areas have been as much a part of the social structure of the villages as of their economic structure. No doubt the craftsmen engaged in these activities have been supplying their products to the farmers and other producers in exchange for items of their own livelihood needs, but the exchange has been more often a matter of mutual obligations set by social structure, than of economic motivations of gaining in the process. As a result the economic categories of 'industry' and 'occupations', had been more or less completely fused in social categories of 'castes'; and such fusion over time led to a rigid and rather inflexible division and segregation of activity spheres, by caste categories. Inter-occupation mobility thus became virtually non-existent, and identification of castes with hereditary activities complete.

It would, however, be wrong to assume that the economic segregation of activities by caste categories was solely a result of the rigid social stratification system. On the contrary, it is very plausible to hypothesise that differentiation based on the possession of economic assets and resources provided the accentuating force in the process of social segregation. Whether such a hypothesis holds or not can be seen on the basis of the study of recent trends in rural economy and society, when the exchange is no longer always a matter of social obligation; opportunities

for occupational mobilities have increased due to the emergence of certain non-traditional activities in the rural areas; and commercialisation and economic calculus have made inroads into the rural society. In this situation it is interesting to examine whether it is caste or resources that is holding back a person in the traditional family occupation and enabling another to go into an activity other than his family has been traditionally carrying on.

We have endeavoured to examine this issue on the basis of the data collected in our sample survey of industrial units in Varanasi and Gorakhpur districts. Before that, however, it would be in order to describe the characteristics of the 387 units covered in our survey, to provide a background to the examination of this issue as well as to the discussions in the subsequent parts of study.

Nature of Products

The 387 rural industrial units covered in our survey in six blocks of Varanasi and Gorakhpur districts belonged to 17 product categories. The largest number of units covered belong to bamboo products group followed by pottery. The next product groups in which sizeable number of units were covered are wire-meshing and leather, closely followed by handlooms, beadmaking and carpentry. Then come two rather new activities, namely, manufacture of hub brushes and lamp shades. Food products, mat making, ring making, blacksmithy, oil products and toy-

making also have a good number of units covered in the study. Besides, a few units of rope making and bidi manufacture are also covered. Thus the range of products manufactured by the units covered in the survey is wide, covering traditional and modern, skill based and material based, and with local as well as urban demand.

It is also seen that most of the industries have a degree of localisation in one or two blocks only covered in the study. No doubt, bamboo products and pottery were found in all the four blocks of Varanasi but leather and leather products units were found in sizeable number in Sardarnagar (Gorakhpur) and Chandauli (Varanasi) blocks only, wiremeshing and beadmaking in Sevapuri and Chiraigaon (both Varanasi) blocks only, carpentry in Chiraigaon only, hubbrush units in Sardarnagar, lampshades in Sevapuri, mat making in Chandauli and ring making and toy making in Niamatabad (Varanasi). Sahjanawa block (Gorakhpur) gave a sizeable number of units in handloom alone. For the purposes of analysis, however, we have pooled units from all blocks together. The analysis is carried out by product groups, not by blocks where the units are located, for the reasons that no significant differences in endowment and levels of development were found among blocks and as indicated earlier the focus of our study has been on activities rather than on area.

Activities like pottery, carpentry, blacksmithy and leather work are, of course, traditional village industries and are

found almost every where in the area though they might have somewhat larger concentration in one place as compared to others because of locational advantage primarily in terms of raw material. Most of the output of these industries is used in the villages themselves. Bamboo products mainly consist of baskets, serving both rural and urban markets, and their concentration is primarily dependent on the proximity to source of raw material, bamboo forests. Lampshade manufacture is not a traditional rural activity, its emergence in a block in Varanasi is the result of entrepreneurial 'adventure' of some return migrant from urban areas and also the proximity of the manufacture centre to the urban area, for, lampshades have only an urban market. The same is true of wiremeshing. Although wirenets prepared by the manufacturers in the two blocks where these units are located, are used in sieves required for cleaning grains of dust particles etc, and sieves are used both in rural and urban areas, the material, steel wire, is available from towns only and manufacture of sieves also takes place in the towns. Therefore, proximity to an urban area is important for the concentration and development of this activity. The same is the case with the making of hubbrush used in bicycles and tricycles, so far as marketing is concerned, but the specificity of raw material part of which is obtained from ramban plants makes its location somewhat material-specific. Concentration of this activity in Sardarnagar block of Gorakhpur district is explained both by proximity to urban centre and available of the specific raw material. Matmaking units covered

in our survey, make prayer aasanis out of kush grass. Obviously, its concentration is bound to be in places where kush grass is found in plenty and which are nearer a religious centre. It is carried out by women members of mallah families as a subsidiary activity and is concentrated on the banks of Ganga in Varanasi. It may be noted that a number of industries found in Varanasi block, namely bamboo basketry, wire-meshing, lampshade manufacture and matmaking have a common element - weaving skill of some kind or the other. May be since Varanasi district has this skill developed traditionally in saree weaving, the industries using some variant of this skill were more likely to emerge in the rural areas even if some of them used neither local material nor produced for local consumption. In fact, it is found that a number of households now engaged in lampshade manufacture and wiremeshing were earlier in the weaving of sarees, but the menace of middlemen and competition from urban producers drove them out of that activity. Making of glass beads and rings, the other two industries found in sizeable number in some of the blocks of Varanasi district, however, do not fall in this 'weaving pattern', and their emergence may be a matter of historical accident, though to some extent they fall in the pattern of products in demand from pilgrim tourists visiting Varanasi.

Among the traditional industries some product diversification is also found to have taken place in response to the changing

pattern of demand. For example, carpenters have gone in for the production of looms and jackat machines (used in weaving) in one area and carved doors and windows in another, instead of concentrating on the production of ploughs and other agricultural implements as earlier. Blacksmiths in some areas have been manufacturing locks for some years, as the traditional products like spades, sickles, plough blades etc., alone could not sustain them. Availability of electricity in the village also enabled them to effect this diversification. Many of them combine carpentry and blacksmithy. Pottery and leather work have, however, not found scope for diversification and have been concentrating on the production of traditional items only. In leather, the recently introduced system of licensed contractors for collection of hides, has deprived the households engaged in this activity of raw material; and, as a consequence, this activity has shown a steep decline.

Caste Affiliation of Rural Industry

It is well known that the traditional industrial activities in the villages have been carried out for centuries on caste basis. Lohars carried out blacksmithy, chamars leather work, telis oil crushing, kumhars pottery etc, and there are, of course, regional variants of the occupation-caste identification. Over the period the caste-affiliation could have been expected to get loosened, particularly when the technology of production changes, economic compulsions and motivations become more prominent, commercialisation gets introduced and education spreads in the

villages. No such change is, however, discernible; and in fact, many of the non-traditional industrial activities are also found to have developed new caste and community affiliations and concentrations.

Almost each of the industry, traditional or modern, is covered in our study, has all or most of the entrepreneur households belonging to a single caste or community (Table II:1). Thus while it is not unexpected to find that all leather units are operated by chamars, carpentry and blacksmithy is carried out almost exclusively by lohars and all but one pottery units are run by kumhars; it is not equally easy to understand as to why bamboo basketry is carried out almost exclusively by dharkars and banbasis, wiremeshing by rajbhars, hubbrush making by lohars, oil products by vaishyas and ring making by muslims. In some of the activities possession of traditional skills rather than caste-based aversion to an activity may lead to such association. That is why handlooms in Gorakhpur blocks are entirely in the hands of muslim community to which weavers mostly belong. The skills could, however, be expected to spread across caste and communities if the activity is remunerative enough. From this angle all activities except leather work for which there is a strong caste based aversion can be expected to spread among caste and communities.

Some of the new activities, even though concentrated in one or few castes, do, however, show a wider social base. Wiremeshing

Table II:1Caste Affiliation of Entrepreneur Households

	Brahmin or Rajput	Vaish- yas	Inter- mediate castes	Sche- duled castes and Tribes	Muslims	Others	Total
1. Bamboo products	-	-	-	66	-	-	66
2. Pottery	-	-	-	57	-	1	58
3. Wire Meshing	-	-	9	21	1	-	31
4. Leather Products	-	-	-	31	-	-	31
5. Handloom	-	-	-	-	28	-	28
6. Beadmaking	3	-	18	6	-	-	27
7. Carpentry	-	-	-	24	-	2	26
8. Hubbrush making	-	-	-	25	-	-	25
9. Lampshade manufacturing	1	2	7	1	9	-	20
10. Food products	-	18	-	-	-	-	18
11. Matmaking	-	-	1	11	-	-	12
12. Ring making	-	-	2	-	9	-	11
13. Blacksmithy	1	-	-	10	-	-	11
14. Oil products	-	9	-	1	-	-	10
15. Toy making	5	-	-	-	-	-	5
16. Rope making	-	-	-	4	-	-	4
17. Bidi manufac- turing	-	-	-	-	4	-	4
TOTAL	10	29	37	257	51	3	387

even though predominantly carried out by rajbhars has a sizeable number of entrepreneurs from among kurmis, beadmaking has some concentration among mauryas, but a good number of high caste Hindu, rajbhar, kurmi, and ahir households are also engaged in this activity. Lampshade manufacture has most entrepreneurs from muslim and kurmi communities, but a few are also from caste Hindus, vaishyas, telis and mauryas. Matmaking is exclusively carried out by mallah households, toymaking by high caste (Brahmin or Kshatriya) Hindus and bidi making by muslims.

Social segregation of occupations and activities based on religious and ritual aversion can be broken only with change in social values through education, and technological and organisational transformation of activities and is, therefore, likely to take a long time. But most of the rural industrial activities we have covered do not have any such basis of segregation and caste association. To some extent, traditional skills are responsible for this segregation, but most of the skills are rather simple and could be spread if there is need and motivation for undertaking these activities by larger numbers. Two alternative hypotheses suggest themselves as explanation of a strong tendency of caste-activity association. One, the caste or community engaged in an activity forms a strong wellknit group and is capable of preventing the entry of those outside their group in their activity. Two, the activities are not economically remunerative enough to induce others to enter them, particularly when they have some other alternative more remunerative activity to engage in; and therefore, only those

who have no such alternative are engaged in these activities. In the situation studied by us the latter hypothesis seems valid. Predominance of scheduled caste harijans and scheduled tribes, who are landless and also lack any other income-yielding assets, in most traditional activities is one evidence to this effect. And the entrenchment and sometimes predominance of non-harijan Hindus in new and growing activities is another. The landed classes, which consist of higher castes, do not find the traditional rural industries attractive enough, particularly in comparison to agriculture; and the landless have to engage themselves in these activities despite low productivity and earnings in the absence of any other alternative. Further, the landless and assetless classes also do not find it possible to engage in new and growing industrial activities, most of which require investment of resources, which they cannot afford. Therefore, we find a predominance of landed belonging to the middle or high castes in these activities. Wiremeshing and lampshade manufacture, oil products and food product (rice mills) are the examples of this kind in which most of the entrepreneurs households belong to intermediate or high castes.

Thus, on the whole, the traditional activities requiring negligible investment but also yielding very low incomes are carried out by landless harijans, while new activities generating relatively high incomes but also requiring sizeable investment are shared by the intermediate and high castes. It can, therefore, be concluded that the social segregation of rural activities

that apparently looks caste-based is in reality-based on the class structure of the rural population reflected in the ownership of assets and resources.

Occupational Background and Mobility

Activities in which the landless predominate have mostly been carried out by them for generations. Lack of resources to undertake alternative occupations have forced them to remain in these activities. Thus almost all units in bamboo basketry, and all units in pottery, leather, handloom and rope making are hereditary while most of the units in lampshade manufacture, bead making, ring making, oil products and toy making have been taken up by members of the present generation of households whose main activity traditionally has been different (Table II:2). It is somewhat surprising to find that a sizeable units in blacksmithy and carpentry are not hereditary. Yet all the households in carpentry reported it as their traditional family occupation, though fathers of the present entrepreneurs were not engaged in this occupation in a sizeable number of cases. It looks that with the emergence of new products and better prospects of trade they have found it worthwhile to return to their traditional occupation. Similar situation is found to prevail in case of blacksmithy as well, though a few non-lohars have also entered the trade after lock

making has picked up as a part of this activity and the prospects have accordingly brightened.

By and large intergeneration mobility is found low in traditional activities. In 60 per cent of the cases, the father also worked in the same unit, mostly as owner-entrepreneur or unpaid family worker. But it is leather products only where the fathers of all the respondents worked in the same unit. In bamboo products, pottery and handloom their percentage was again very high. But majority of entrepreneurs in wiremeshing, bead making, hubbrush making, lampshade, mat making, ring making, oil products, toy making and bidi making, did not have their fathers working in the present units. There are two kinds of cases evident : in some activities the sons generation has moved into an activity different from their fathers due to its better prospects (e.g. wire knitting, lampshade manufacture, bead making, oil products) whereas in other cases they have taken up the present activity because the one carried out by their fathers did not provide adequate opportunity (e.g. toy making, bidi making, ring making et). A significant degree of intergeneration mobility is also evident among carpenters, blacksmiths, food processing, and hubbrush making.

Opting for an occupation different from father's may not necessarily mean a shift from family occupation, as the father

Table II:2

Occupational Mobility of Entrepreneur Households

Industrial Activity	N	Unit		Father of present entrepreneur		Traditional family occupation		Wage labour
		Inherited	Started by pre-sent generation	Worked with same unit	Did something else	Present industrial activity	Farming Trading	
1. Bamboo products	66	64	2	60	6	66	0	0
2. Pottery	58	58	0	49	9	58	0	0
3. Wiremeshing	31	17	14	14	17	19	11	1
4. Leather products	31	30	1	31	0	26	4	0
5. Handloom	28	28	0	26	2	28	0	0
6. Beadmaking	27	2	25	2	25	6	21	0
7. Carpentry	26	15	11	15	11	26	0	0
8. Hubbrush making	25	12	13	8	17	10	0	0
9. Lampshade manufacturing	20	0	20	0	20	11	9	0
10. Food products	18	11	7	11	7	2	1	0
11. Matmaking	12	7	5	4	8	12	0	0
12. Ring making	11	0	11	0	11	8	3	0
13. Blacksmithy	11	5	6	5	6	10	1	0
14. Oil products	10	1	9	1	9	0	0	0
15. Toy making	5	1	4	1	4	1	2	1
16. Rope making	4	4	0	3	1	3	1	0
17. Bidi manufacturing	4	0	4	0	4	0	1	2
ALL	387	253	134	230	157	286	54	43

may himself have engaged in an activity other than the one traditionally carried out by his family. In 74 per cent of cases, however, the industrial activity of the respondent is the same as traditional occupation of the family. In 14 per cent cases farming and in another 11 per cent cases trade has been the traditional family occupation. The respondents' families have been traditionally living on wage labour in one per cent cases. Thus in 26 per cent cases the entrepreneur's activity is different from the family occupation although it is different from his father's occupation in 40 per cent cases. Industries where entrepreneurs' households have a different traditional activity from what he is currently engaged in, in a significant proportion are: wiremeshing (30%, farming) beads (74%, farming), hubbrush (60%, trading), lampshade (45%, farming), food products (80%, trading), ring making (28%, trading), and oil products (100%, trading). These features of the occupational background of the families of entrepreneurs of rural industrial units reveal the following important facts. One, the traditional unremunerative industries have not attracted many entrepreneurs from households with **some other** occupation such as farming and trading. Two, a significant part of the rural industrial activity in the new and growing lines of production is in the hands of members of farming and trading households. These propositions go to support our earlier hypothesis regarding the relationship between asset-holding and kind of industrial units carried out by the rural households.

Thus, occupational mobility has mainly taken the form of some members of resourceful farming and trading households entering industrial activities of the growing and remunerative nature. These households, however, carry the new activity along with traditional family occupations. In some activities, the entrepreneurs of industrial units look after also the other family activity. Thus two-thirds of the entrepreneurs in bead making units divide their time between the industrial units and farming, and a similar proportion of them in hubbrush making units also look after trading activities of their families. The only other activity where a sizeable proportion (one-sixth) of entrepreneurs work part time in the industrial activity is bamboo products, where low income from this activity compels them to engage in wage labour for part of the time. In all other cases the entrepreneurs are engaged solely in the industrial activity concerned: in all 87 per cent of the entrepreneurs are engaged in the industrial activity under consideration on a full-time basis.

All of the respondent entrepreneurs did not start work with their present activity; around one-third of them worked in some other occupation before taking up the present industrial activity, while two-thirds, of course, started with their present activity (Table II:3). Of those who did some other work earlier, most were engaged in some other activity on a self-employed basis in the rural areas (45%), wage labour in the same industrial activity in the rural area (21%) or in farming (17%). Seven per cent worked as wage-earners in some urban area. Shifts

Table II:3

Educational and Occupational Background of Entrepreneurs

Industry	No. of units	Age of Entrepreneurs		Education of Entrepreneurs	Started work						
		Below 35 years	35 years and above		Average age (Years)	Illiterate and literate upto Primary	Beyond Primary	As at present	As cultivator	As self employed	As wage labour activity
1. Bamboo products	66	39	29	39.52	55	11	0	66	0	0	0
2. Pottery	58	12	46	44.31	35	17	6	56	1	0	1
3. Wiremeshing	31	17	14	34.16	20	7	4	22	1	0	9
4. Leather products	31	5	26	43.19	19	9	3	26	1	1	3
5. Handloom	28	6	22	45.71	5	22	1	27	0	0	1
6. Beadmaking	27	15	12	34.30	12	12	3	5	15	2	5
7. Carpentry	26	6	20	43.96	4	20	2	14	0	3	9
8. Hubbrush	25	9	16	37.88	3	18	4	10	0	14	1
9. Lampshade	20	10	10	35.00	7	8	4	1	4	15	0
10. Food products	18	5	13	40.50	7	9	2	13	0	5	0
11. Matmaking	12	1	11	44.17	10	2	0	8	0	2	2
12. Ring making	11	5	6	36.27	4	7	0	3	0	2	6
13. Blacksmithy	11	3	8	40.91	2	7	2	5	0	3	3
14. Oil products	10	1	9	45.00	0	9	1	0	0	10	0
15. Toy making	5	3	2	32.20	1	4	0	1	0	2	2
16. Rope making	4	2	2	32.75	3	1	0	2	0	0	2
17. Bidi manufacturing	4	1	3	40.50	0	3	1	2	0	2	0
ALL	387	130	257	40.27	187	166	34	260	22	61	44

from some other rural non-farm self-employed activity to the present one have been made by a significant proportion of entrepreneurs in hubbrush making (56%), lampshade (75%) and oil products (100%). 'Promotion' from wage labourer to owner-entrepreneur status in the same activity has been achieved by a significant proportion of entrepreneurs in carpentry (19%), wiremeshing (20%) and ring making (45%). Fifty five per cent of the bead makers and 25 per cent of lampshade manufacturers have had a stint in farming earlier, but in bead making most entrepreneurs even now work on farms part of their time. The above activities, could, therefore be considered as one, where the present entrepreneurs have entered as a matter of choice while in others they have to be there in the absence of any alternative.

One wonders what would be the opportunities of mobility for these entrepreneurs to other occupations and jobs if they found their present activity unremunerative. Some of the characteristics for which we have information available suggest that the prospects, in general, may not be very encouraging. Most of the entrepreneurs are middle-aged at an average of 40 years. The older persons, however, especially dominate the traditional industries like leather products, pottery, handloom and carpentry. On the other hand, two-thirds of the entrepreneurs in wire meshing, bead making, hubbrush and lampshade units are below 40 years of age. Differences in average ages of entrepreneurs are not very wide among different products, yet the

the traditional industries have more of such entrepreneurs who are past the age of effecting a change involving occupational mobility. The young entrepreneurs, below 30 years of age who could be more likely to be able to make such a change constitute 30 per cent ~~in~~ lampshade manufacturing, 36 per cent in hubbrush units, 23 per cent in wire meshing, 33 per cent in bead making, but only 10 per cent in pottery and leather units, and 15 per cent in handlooms.

Similar pattern emerges when we look at the literacy and educational levels of the entrepreneurs. In the aggregate 48 per cent of them are illiterate, 26 per cent are literate but without having passed any formal school stage, 18 per cent had education upto primary level, 8 per cent higher than primary including one per cent who had obtained a college degree. Illiterates and those without any formal schooling, however, make 93 per cent of entrepreneurs in bamboo products, 80 per cent in pottery, and leather, 87 per cent in handloom, 75 per cent in wiremeshing, 56 per cent in beads, 60 per cent in hubbrush, and 40 per cent in lampshade ~~manufacture~~. This difference in the literacy and education among the different industries may, however, not mean a significant variations in terms of their potential mobility, as those educated also have little schooling, mostly upto primary level. In case, however, literacy by itself is an enabling factor, the entrepreneurs of non-traditional lines of products stand a better chance of moving into other occupations, if need be.

It, however, looks that most of them may not be very keen on moving geographically, unless forced by circumstances. For, practically in all the industries all entrepreneurs belong to the same village where they are carrying out the present activity. The only product line in which a significant number of them have come from other village and also from other districts, is bamboo basketry. It may, however, be noted that the households engaged in this activity belong to a virtually nomad tribe, banbasi, who move from place to place, depending on where raw material for their activity is easily available.

A further reason as to why the occupational and geographical mobility of most entrepreneurs is limited also lies in the fact that these activities are primarily carried out on a household basis, and provide a source of employment to most family members at one place even if at low levels of earnings and an alternative with similar opportunities with better earnings may not easily be forthcoming.

Activity Status of Household Population, Child Labour and Schooling of Children

The sample population gave a crude activity rate of 51.75 per cent. All the workers were found employed except one, thus yielding a complete non-existence of chronic unemployment among these households. Of the total population of 2230 persons, 1437 were found in the age groups 15 years or more; workers, including 93 from the age-group below 15 years, totalled 1154 (Table II:4).

Table II:4

Age and Activity Status of the Members of Rural Industrial Households

Industry	No. of house- holds	Persons in the age group				Activity status*				
		0-15	15-50	50+	Total	Child	Student	Working	House- wife	Others (retired & disabled) 0-15
1. Bamboo products	66	104	150	26	287	71	10	176	26	3
2. Pottery	58	105	206	22	333	76	19	213	22	3
3. Wiremeshing	31	69	91	10	170	43	21	59	44	3
4. Leather products	31	54	98	28	181	30	17	106	27	1
5. Handloom	28	67	96	12	175	46	4	110	14	1
6. Beadmaking	27	45	92	14	151	29	13	68	31	10
7. Carpentry	26	59	75	13	147	40	16	53	34	4
8. Hubbrush making	25	48	85	11	144	26	14	82	15	7
9. Lampshade manufac- turing	20	51	70	13	147	36	10	67	22	12
10. Food products	18	34	63	7	104	22	18	47	17	0
11. Matmaking	12	31	32	13	76	29	2	38	6	1
12. Ring making	11	39	38	4	81	16	14	41	9	1
13. Blacksmithy	11	29	38	6	73	19	8	25	17	4
14. Oil products	10	22	49	7	78	11	19	27	18	3
15. Toy making	5	12	16	6	34	6	4	21	2	1
16. Ropemaking	4	16	9	2	27	12	1	12	-	1
17. Bidi manufacturing	4	8	12	2	22	4	4	8	5	1
ALL	387	793	1241	196	2230	516	194	1154	309	57
										97

* only one person, in the bamboo products group, reported unemployed.

Thus the worker participation rate of those in the working age group turned out to be 73.83 per cent, the rest constituting house-wives(21.50%), retired (2.18%), disabled (1.94%) and students (0.90%).

Thus not only all the members of these households in the working age group and available for work were engaged in some activity or the other, but a significant number of children were also obliged to work to supplement the family incomes. Around 8 per cent of the total workers of these households were found to be below 15 years of age, which makes 12 per cent of population in the age group 0-15 years. Assuming that all these belonged to the age group 10 to 15 years, labour force participation rate in the age group turns out to be 39 per cent. The household industries in which child workers are found to be in significant number are bamboo basketry, handloom, hubbrush making, ring making, and leather work; the percentages of workers among children in these industries being : 22, 25, 17, 23 and 13. And it is found that almost all the children in the age group 10 to 15 years of household in bamboo basketry and toy making and at least one-third among those belonging to the households engaged in pottery, wiremeshing, handloom, hubbrush making, lampshade manufacturing and ring making, are working.

On the other hand, although there were 567 children in the school going age group, 5-15 years, total number of persons with 'student' as their activity status were only 194 in the

sample households even after including a few with 15 years or more of age reported as students. Most of the latter category of students was from the households engaged in food products and oil products, which used no child labour; all the children belonging to the school going age went to school and some members of these households were also continuing their education beyond the age of 15 years. Not all, but a significant proportion of 5-15 age group population were attending school from the households engaged in wiremeshing (45%), leather (43%), bead making (40%), carpentry (38%), hubbrush making (33%), ring making (55%), blacksmithy (45%), toy making (66%) and bidi making (56%). On the other hand, students made only one-fourth or less of the 5-15 age group population in bamboo basketry (16%), handloom (8%), mat making (8%) and rope making (11%) households.

Thus it looks that majority of the members of the next generation, particularly of the households engaged in traditional rural industries, would hardly be equipped to move into some other occupations due to the lack of education; in fact, a significant proportion of them have already chosen their vocation by starting work in the household activity.

Majority (71%) of the households expressed themselves in favour of the continuation of their children in the same activity as theirs. To a large extent it should be taken as a reflection of their inability to equip their children educationally and financially, to undertake some other activity, though in some cases

good return and prospects of the present activity, may evoke such a response. The hypothesis of 'no-choice' kind of a situation seems valid in the case of bamboo basketry, pottery, leather products, and carpentry where despite low incomes, a sizeable proportion of the households 'want' their children to continue in the respective activities. On the other hand, there are activities which provide a reasonably good, current income, which enables the households to equip their children for some other activity, and at the same time income is not so high and prospects not so bright as would induce them to engage their children in the same activity. Beadmaking and blacksmithy seem in this category. Then there are industry groups, where the incomes and prospects are good enough for households to deliberately make a choice of continuing their children in the household activity, though it should be possible for them to undertake some other activity as well. Households engaged in wiremeshing, hubbrush-making, lampshade manufacture, food products and oil products seem to be able to make a such a choice.

Activity Structure of Family Workers

In most cases, the rural industrial households are not only mainly, but solely dependent on the industrial activity. Overall, 95 per cent of the household workers are engaged in these units: 81 per cent carry it out as their sole activity; 11 per cent as the principal activity combined with some other activity as subsidiary occupation and three per cent were engaged in industrial activity on a subsidiary basis with some other activity as their main vocation (Table II:5). The eight per cent carrying out other than household industry as their principal or sole

Table II:5

Activity Structure of the Workers of Rural Industrial Households

Industry	No. of house- holds	No. of wor- kers in house- holds	Engaged in House- hold industrial activity		Engaged in farming activity		Self-employed in some other wage labour		Working as pri- nci- pal occu- pa- tion
			as prin- cipal occu- pa- tion	as se- con- dary occu- pa- tion	as prin- cipal occu- pa- tion	as se- con- dary occu- pa- tion	as prin- cipal occu- pa- tion	as se- con- dary occu- pa- tion	
1. Bamboo products	66	176	159	2	1	-	3	3	13
2. Pottery	58	213	198	2	-	15	1	-	14
3. Wiremeshing	31	59	50	4	8	8	-	-	1
4. Leather products	31	106	100	-	-	-	3	1	3
5. Handloom	28	110	108	-	-	-	-	-	2
6. Beadmaking	27	68	50	8	12	36	4	2	2
7. Carpentry	26	53	50	-	-	-	-	-	3
8. Hubbrush making	25	82	77	3	-	-	2	13	3
9. Lampshade manu- facturing	20	67	65	-	-	-	1	25	1
10. Food products	18	47	46	-	-	-	1	2	-
11. Matmaking	12	38	26	-	-	-	10	1	2
12. Ring making	11	41	41	-	-	-	-	-	-
13. Blacksmithy	11	25	23	-	-	-	-	1	2
14. Oil products	10	27	24	-	-	-	3	10	-
15. Toy making	5	21	21	-	-	-	-	-	-
16. Rope making	4	12	12	-	-	-	-	-	1
17. Bidi manufacturing	4	8	8	-	-	-	-	1	-
ALL	387	1153	1058	19	21	59	28	59	46
									22

activity, were engaged as wage earner in some other activity (3%), or were self-employed in some other non-farm activity (2%) or were cultivators (3%). Subsidiary activity combined with industry, mostly consisted of farming (5%) and self-employment in the non-farm rural activity (4%). Strangely enough, not many of the members of sample households are found to engage themselves as wage labour in agriculture : in the entire population of 1157 workers in the households only three reported agricultural labour as their principal and none as subsidiary activity.

Exclusive dependence on the household industrial activity for employment of the family workers was predominant in most of the cases : over 90 per cent of the workers of households engaged in bamboo basketry, pottery, leather, carpentry, handloom, ring making, blacksmithy, toy making, and rope making were exclusively dependent on the respective industrial activity. On the other hand, thirteen per cent workers of wiremeshing households engaged themselves in farming as their principal and another 13 per cent as subsidiary occupation. In bead making households also, farming is an important activity, 18 per cent workers of these households carried it as principal and 53 per cent as subsidiary activity. In the hubbrush making households, self-employment in some other non-farm rural activity is a significant, though subsidiary occupation of around 21 per cent workers. The same is true of the lampshade manufacturing households: 37 per cent of their working members are engaged in some other

non-farm rural activity as their subsidiary activity. Workers belonging to the households engaged in food products do not generally engage themselves in any other activity either as principal or subsidiary activity. The males of the mat making households are generally self-employed in ferrying, or are engaged in wage labour, but females carry out mat making almost exclusively. A substantial proportion (37%) of the workers belonging to the households of entrepreneurs in oil products, carry out trading in urban areas, though as a subsidiary activity.

Usually, it is the members of the households engaged in the relatively better yielding industrial activities (e.g. bead making, oil products, wiremeshing and hubbrush making) who also carry out some other activity as their principal or secondary activity. On the other hand, in most of the low yielding activities, almost all the household workers are engaged exclusively in these activities. Thus incapacity in terms of resources like land and capital, skills and education rather than choice, is the major factor in their exclusive dependence on the traditional household activity.

Household Income Levels

In the absence of any other activity as a significant source of employment, the household industry also provides the major, if not the sole source of income in almost all activities (Table II:6). The average income of the rural industrial households

is estimated, on the basis of our sample at Rs.6133 per annum. The households engaged in food products and oil products have an average income of over Rs.12,000 per annum; and those engaged in wiremesh manufacture, and lampshade manufacture, ring making and blacksmithy between Rs.5000 to Rs.10,000. In all other cases, it fell below Rs.5000, the lowest being in bamboo basketry at Rs.2890. Incomes of 64 per cent households is less than Rs.5000 per annum; and of 30 per cent less than Rs.3000 per annum. On the other hand, 9 per cent households have an income of over Rs.10,000 and an equal number between Rs.7500 and Rs.10,000 per annum. The percentage of households with less than Rs.3000 income per annum, is over 50 in case of those engaged in bamboo products, carpentry and mat making; and around one-third in pottery. On the other hand, over half the households in wiremeshing, hubbrush making, lampshade manufacture, and oil products have incomes over Rs.5000 per annum. In most industries, however, there is a sizeable concentration of households in the income group Rs.3000-5000.

The per capita income of the rural industrial households in the sample averaged to Rs.1064.76. Food products, oil products and wiremeshing households had the highest average per capita income at Rs.4341, Rs.1693.59 and Rs.1970.80 respectively. The lowest per capita income was registered in

Table II:6

Income Levels of Rural Industrial
Households

Industry	Average income of households (Rs.)		% of Average 3 to 2	size of family	Per Capita income (Rs.)
	Total	From household industry			
(1)	(2)	(3)	(4)	(5)	(6)
1. Bamboo products	1890	2743	94.91	4.35	664.37
2. Pottery	4614	4334	93.93	5.74	803.83
3. Wiremeshing	10800	10437	96.64	5.48	1970.80
4. Leather products	4802	4392	91.46	5.81	826.51
5. Handloom	4884	4732	96.89	6.25	781.44
6. Beadmaking	4300	3738	86.93	5.59	769.23
7. Carpentry	3136	3038	96.88	5.65	555.04
8. Hubbrush making	5758	4180	72.59	5.76	999.65
9. Lampshade manufacturing	4895	4795	97.96	7.35	665.99
10. Food products	25091	25083	99.97	5.78	4341.00
11. Matmaking	2692	2658	98.74	6.33	425.28
12. Ring making	5182	5182	100.00	7.36	704.08
13. Blacksmithy	5113	5003	97.85	6.64	770.03
14. Oil products	13210	11760	88.96	7.80	1693.59
15. Toy making	3500	3320	94.86	6.80	514.71
16. Rope making	3325	3325	100.00	6.75	492.60
17. Bidi manufacturing	3450	3250	94.20	5.50	627.27
ALL	6133	5597	91.26	5.76	1064.76

mat making (Rs.425.28) followed by rope making (Rs.492.60), toy making (Rs.514.71) and carpentry (Rs.555.04). In all other cases, the households had a per capita income between Rs.600 and Rs.1000. If we take a figure of Rs.60 per month as the income required to meet the subsistence needs of a person, at the 1978 level of prices in the rural areas surveyed, we find that quite a few industries did not provide the per capita income at this level to households engaged in them. The industries which fell short of this figure are : rope making, toy making, bidi making, bamboo products, carpentry and mat making. Pottery, leather products, handloom, beadmaking, lampshademaking, ring making and blacksmithy were capable of providing incomes at around the subsistence level. Households engaged in wiremeshing and hubbrush making, food products and oil products, of course, had a sufficiently high level of incomes.

CHAPTER III

Mode of Production, Technology and Size Structure

The size of rural industrial units is generally very small both in terms of number of workers employed and volume of output produced. One of the reasons for their small size is their household character : the employment size is generally limited by the number of workers in the owner household and the major motivation in operating the unit is to earn livelihood for the family rather than accumulation and expansion. It is evident from the fact that only 24 per cent of units in our sample used non-family labour on a hired basis, and only 8 per cent used 5 or more hired workers. Hired workers constituted 23.61 per cent of the total workers engaged in the sample units (Table III:1).

Mode of Production

Thus one could observe that the mode of production in the rural industrial units was predominantly pre-capitalist. There, are however, a few industries which are run or are tending to start operating on capitalistic lines, if use of wage labour is taken as the criteria for this purpose. Majority of units use hired labour and the major part of the workforce consists of wage labour in the following industries : wiremeshing where over 50 per cent units use wage labour which constitutes 59 per cent of the total workforce in the industry; beadmaking in which 70 per cent units employs workers on wages, who constitute 65 per cent of the total workers; and, bidi making with 50 per cent

Table III:1Extent of Use of Hired Labour

Industry	Total No.of Units	No.of Units Using Hired Labour	Total Wor- kers	Hired work- ers	Average no.of workers per unit (Total)	Average number of hired wor- kers per unit
1. Bamboo products	66	0	167	0	2.53	0
2. Pottery	58	1	205	5	3.53	0.10
3. Wiremeshing	31	16	122	72	3.90	2.29
4. Leather products	31	0	101	0	3.26	-
5. Handloom	28	9	130	21	4.64	0.75
6. Beadmaking	27	19	155	100	5.70	3.67
7. Carpentry	26	5	63	12	2.42	0.46
8. Hubbrush making	25	15	134	50	5.36	2.00
9. Lampshade manufac- turing	20	4	94	16	4.70	0.80
10. Food products	18	8	84	34	4.67	1.89
11. Matmaking	12	0	31	0	2.58	0
12. Ringmaking	11	1	50	8	4.55	0.73
13. Blacksmithy	11	3	28	4	2.64	0.45
14. Oil products	10	9	30	13	3.00	1.30
15. Toy making	5	0	19	0	3.80	0
16. Rope making	4	0	12	0	3.00	0
17. Bidi making	4	2	20	10	5.00	2.50
ALL	387	92	1445	341	3.73	0.89

of its units using hired workers making 50 per cent of the workforce also. In hubbrush making though 60 per cent units hire workers, the hired workers make only 37 per cent of the total employment, and similarly, in oil products 90 per cent units use wage labour, but proportion of hired workers to total workers is 43 per cent only. In these cases most units use small magnitude of hired labour primarily to supplement the household labour, and therefore the mode of production has not yet turned capitalist in most cases. Quite a few units in food products mainly engaged in rice and flour milling on the other hand, are run on capitalistic lines, though majority of the units (56%) do not use hired labour, and hired workers constitute only 40 per cent of the workforce. In handloom about one-third units use hired labour which constitutes, but only 16 per cent of workforce, as most of the units employing wage labour, use only small number of workers on that basis. The other industries which have a significant proportion of their units using hired labour, and of hired workers in employment are : carpentry (25% units and 20% workers), lampshade manufacture (20% units and 17% workers), and blacksmithy (27% units and 14% workers).

Production on capitalist lines is thus carried out mostly in units in the non-traditional product lines with primarily non-local market. To some extent it is also emerging in traditional lines of production, e.g. carpentry and blacksmithy, where a degree of product diversification has taken place and an element of technological change has been introduced. Another associated

but interesting feature to note is that the emergence of capitalist mode of production is operating in the product lines which are in the hands of classes owning assets and resources, and also having some other activities carried out by their households. They are mainly landed and higher caste entrepreneurs. Their motivation are capitalistic as against subsistence in case of others, they are capable of running their units on a scale and basis that requires use of hired labour to a significant extent, and some of their own family members are either engaged in some other activity, or education or are otherwise not available to work in these units. While, therefore, certain product lines could be identified as having stronger tendency to be run on capitalist lines than others, the basic reason for operation of different modes of production in the industries under consideration is to be found in the resource endowment of the entrepreneurs which also determines their motivation in economic activity.

Employment Size

The size-mode interrelationship is yet another dimension of the resource-mode interrelationship. The household units are smaller in size while the relatively large units use a capitalist mode of production to the extent they make a significant use of hired labour. This pattern is quite clearly revealed even on the basis of inter-industry comparisons. On an average a unit in our sample employed 3.73 persons, of which 0.83 were hired workers. Beadmaking had the largest average employment size of units at

5.70 persons, followed by hubbrush making (5.36), bidi making (5.00), lampshade (4.70), food products (4.67), handloom (4.64) and wire meshing (3.90). In all these industries, mode of production has turned capitalist in a significant way. On the other hand, bamboo products and matmaking, have one of the smallest average of employment per unit and no hired workers were used by any unit in these activities. Blacksmithy and carpentry, however, have some units using significant magnitude of hired labour despite the overall small size of the units, and ring making and toy making had relatively larger size of units on an average, but production was more or less solely based on self-employment.

The size structure of sample units was, however, dominated by small units. Only 16 per cent units employed more than five workers each (Table III:2). On the other hand, seven per cent units were run by one worker singly. Two or three workers each were employed by 56 per cent units and 4 or 5 workers by another 27 per cent. Units employing one to three workers each made more than three-fourths of the sample in bamboo basketry, carpentry, mat making and blacksmithy. Units in traditional industries like pottery, leather work and handloom, although run predominantly on household basis had a significant proportion among them which employed a relatively larger number of workers, i.e. between 4 and 10. It seems that in these industries, all the workers belonging to the household are engaged in these

Table III:2Size Structure of Units by Number of Persons Employed

Industry	Number of persons employed					Total Units	Total Workers
	1	2 - 3	4 - 5	6-10	11-15		
1. Bamboo products	4	49	13	-	-	66	167
2. Pottery	4	27	20	7	-	58	205
3. Wiremeshing	5	13	4	9	-	31	122
4. Leather products	2	15	12	2	-	31	101
5. Handloom	-	10	11	7	-	28	130
6. Beadmaking	1	2	9	13	2	27	155
7. Carpentry	6	17	3	-	-	26	63
8. Hubbrush making	-	8	8	7	2	25	134
9. Lampshade manufacturing	-	9	6	4	1	20	94
10. Food products	-	9	4	4	1	18	84
11. Matmaking	1	10	1	.	-	12	31
12. Ringmaking	-	5	3	2	1	11	50
13. Blacksmithy	1	9	1	-	-	11	28
14. Oil products	-	6	4	-	-	10	30
15. Toymaking	-	1	4	-	-	5	19
16. Rope making	-	2	2	-	-	4	12
17. Bidi making	-	2	-	2	-	4	20
TOTAL	24	194	105	57	7	387	1445

activities, while in the case of certain other traditional industries run on household basis, some members of the households are engaged in other activities. This is evident from our analysis of the activity status of the members of the sample households attempted earlier.

The largest average size of employment per unit was found, as noted earlier, in beadmaking in which 55 per cent units employed more than 5 workers each. Next came hubbrush making units where again 36 per cent units had an employment size of 6 workers or more followed by bidi making with 50 per cent units employing 6 to 10 workers each. Lampshade, handloom and ring manufacture also had a sizeable number of relatively larger size units employing on average 4 to 5 workers each.

Output Size

Average size of annual output (in 1978) per unit for the entire sample worked out to Rs.28754. This figure, however, has been propped high due to the unusually high figures relating to two industries: food products in which average value of production turned out to be Rs.3,35,474 per unit, and oil products with average production of Rs.86,617 per unit. In other cases, the average production per unit ranged between Rs.3000 to Rs.32,000 (Table III:3). Overall 39 per cent of sample units produced an output of over Rs.10,000 per annum; another 25 per cent units between Rs.5,000 and Rs.10,000, 17 per cent between Rs.3,000 and Rs.5,000 and 19 per cent less than Rs.3,000 each.

Table III:3

Size Structure of Units by Value of Annual
Production (1978)

Industry	Value of Annual Production Rs					Average value of produc- tion (Rs)
	Less than 3000	3000- 5000	5000- 7000	7000- 10000	10,000 +	
1. Bamboo products	37	19	9	1	5	3164.50
2. Pottery	15	18	10	9	6	4927.60
3. Wiremeshing	1	1	5	3	21	31768.70
4. Leather products	1	3	3	9	15	9571.10
5. Handloom	-	-	1	9	18	23158.30
6. Beadmaking	1	3	5	4	14	11097.95
7. Carpentry	5	6	2	6	7	8569.75
8. Hubbrush making	-	-	2	3	20	16972.00
9. Lampshade manufac- turing	-	5	1	6	8	18001.25
10. Food products	-	-	-	-	18	335473.90
11. Matmaking	10	2	-	-	-	1557.50
12. Ringmaking	1	3	-	2	5	16040.90
13. Blacksmithy	2	3	-	3	3	17092.20
14. Oil products	-	-	-	-	10	86617.00
15. Toymaking	-	1	1	2	1	7577.20
16. Rope making	2	1	-	-	1	4612.50
17. Bidi making	-	2	-	-	2	13005.00
ALL	75	67	39	57	149	28753.55

Besides food products and oil products, the other industries in which a unit on an average turned out relatively large volume of output were : wiremeshing (Rs.31769), handloom (Rs.23158), lampshades (Rs.13001), blacksmithy (Rs.17092), hubbrush (Rs.16972), and ring making (Rs.16041). All units in food and oil products produced an output of over Rs.10,000 per annum; the percentage of such units was 80 in hubbrush making, 68 in wiremeshing, 64 in handloom. On the other hand, bamboo products, pottery, matmaking and rope making units produced an average output of less than Rs.3000. In mat making, which had the lowest average value of output per unit at Rs.1558, 83 per cent units produced output worth less than Rs.3000 each and the rest between Rs.3000 to Rs.5000. In bamboo basketry, the industry with the next lowest average output at Rs.3165, 56 per cent units had an output of less than Rs.3000 each. Pottery units are only marginally better at an average of Rs.4927 with 57 per cent of them having an annual output of less than Rs.5000 and 26 per cent less than Rs.3000 each.

Technology and Capital

The technology used in most of the industries in our sample is traditional mainly involving manual processing of material into output. Mechanical devices are used in most of them but use of electric power is generally absent. Only in certain food products units processing grains and oil mills, power and motors upto 10 HP capacity are used. Power is also used by those units in blacksmithy which manufacture locks. No use of electric power

is made in any other industry. In effect the capital equipment used is simple, light and inexpensive in most cases. In many cases, there is not even a basic or central equipment and production is carried out with the help of tools and instruments. There are, however, quite a few accessories used in most cases. Some kind of a central equipment is found to be used in pottery (wheel, sometimes with ball bearing), wiremeshing (loom), handloom (loom), food products (grinding mill and motor), blacksmithy-lock making (roller machine, punching and power press, lathe) and oil products (oil crushing machine). In all of them as well as in rest of the industries, accessories are of generally miscellaneous kind. Knives, scissors, hammer and sickle are required in most of them. Spindles in wiremeshing and handloom; plane, saw and drill in carpentry; and bellow, stove and burner in blacksmithy, beadmaking and ring making are some of the specific kinds of accessories used.

The cost of equipment per unit is consequently very low: average expenditure on machinery and equipment incurred by a unit comes to Rs.866 (Table III:4). Except in food products, oil products and blacksmithy where a unit on an average has machinery and equipment worth Rs.8554, Rs.6440 and Rs.1700 respectively, the value of capital equipment per unit works out to less than Rs.1000 in all industries. The value is almost negligible (less than Rs.100) in bamboo products, lampshade, matmaking, toys, rope and bidi units. But in wiremeshing, handloom, bead making, and ring making, a unit on average has equipment of relatively higher value, between Rs.500 to Rs.1000.

The equipment and accessories had to be procured from non-local sources in most cases. But in 45 per cent cases they were made locally. Most units in wiremeshing, leather, handloom, hubbrush, lampshade, food products (rice bhujia), mat making, and rope making used locally made tools and instruments. On the other hand, equipment used in blacksmithy, ring making and toy making units had to be procured from outside invariably, and in carpentry, beadmaking, pottery and bamboo products mostly. Most of the equipment and accessories used are, however, very common and could be easily procured, and once procured last for a long time.

With the average value of machinery and equipment per unit at Rs.866 the fixed capital per unit, which included machinery as well as land and building and transport vehicles if any, turned out to be Rs.1540. But just as the average value of equipment in the sample is high due to the unusually large values of food and oil product units, similarly the difference between value of machinery and that of total fixed capital is also rather high primarily due to a sizeable investment by units in these industries in the non-equipment items of fixed capital, mainly land and buildings. As can be seen from the figures given in Table III:4/^{equipment constitutes} most of the fixed capital except in oil mills where only 36 per cent of fixed capital was in the form of equipment and in food products where this percentage was 55. It seems that a sizeable proportion of the fixed investment in these industries was in land and buildings. To some extent, ring making, blacksmithy and bidi units also have this tendency.

Table III:4

Capital Structure of Rural Industrial units

Industry	Number of units with value of fixed capital (Rs)								Average value of		Average working capital per unit (Rs)
	capital								Fixed capital	of which machinery and equip-ment	
	Upto 50	100	300	100-300	500	1000	5000	and above			
1. Bamboo products	26	35	5	0	0	0	0	0	54.00	49.00	46.00
2. Pottery	2	15	35	2	0	4	0	0	239.00	218.00	97.00
3. Wiremeshing	0	0	8	7	7	9	0	0	782.00	727.00	690.00
4. Leather products	0	0	18	13	0	0	0	0	239.00	161.00	280.00
5. Handloom	0	0	9	5	7	7	0	0	691.00	590.00	1211.00
6. Beadmaking	0	0	0	1	16	10	0	0	947.00	768.00	250.00
7. Carpentry	0	1	12	9	3	1	0	0	315.00	253.00	197.00
8. Hubbrush making	0	9	16	0	0	0	0	0	138.00	119.00	476.00
9. Lampshade manufac-turing	12	3	5	0	0	0	0	0	53.00	52.00	427.00
10. Food products	0	0	2	7	0	0	9	0	1549.00	8554.00	28283.00
11. Matmaking	8	4	0	0	0	0	0	0	38.00	33.00	33.00
12. Ringmaking	0	0	2	2	2	5	0	0	800.00	527.00	586.00
13. Blacksmithy	0	0	4	1	3	0	3	0	2187.00	1700.00	478.00
14. Oil products	0	0	0	0	0	0	10	0	17670.00	6440.00	4850.00
15. Toymaking	1	2	2	0	0	0	0	0	78.00	58.00	8.00
16. Rope making	3	1	0	0	0	0	0	0	35.00	35.00	46.00
17. Bidi making	0	1	3	0	0	0	0	0	123.00	43.00	275.00
ALL	52	71	121	47	38	36	22	22	1540.00	866.00	1745.00

The average fixed capital per unit exceeded the figure of Rs.5000 only in 5.68 per cent units all of which belonged to the oil and food product groups: in the former all units had fixed capital beyond this figure, while in food products 50 per cent units (rice and flour mills) had fixed capital worth over Rs.10,000 each, while the rest (mainly food processing units) between Rs.100 and Rs.500 each. In the entire sample, 32 per cent units used fixed capital of Rs.100 each; and 75 per cent of less than Rs.500 each. Another 10 per cent had fixed capital between Rs.500 and Rs.1000 and 9 per cent between Rs.1000 and Rs.5000. All the units in matmaking, 92 per cent units in bamboo products and 75 per cent units in lampshade manufacture used fixed capital worth less than Rs.100 each. Majority of units in all industries except food and oil products, wiremeshing, blacksmithy and beadmaking, had a fixed capital worth less than Rs.300 each.

It is interesting to note that the range of fixed capital investment across units was found to be generally narrow in individual industries. Thus there was no unit using more than Rs.300 worth of fixed capital in bamboo baskets, hubbrush making, lampshades, matmaking, toy making and bidi making. On the other hand, no unit in oil products used less than Rs.10,000 of fixed capital. All units in bidi making had a fixed capital ranging between Rs.50 to Rs.300, and all leather units between Rs.100 and Rs.500. It thus seems that there is very little variability of techniques and sizes in these industries. There seems to be

a fixed technology, involving a given amount of investment in equipment and the number of tools and accessories of small value may increase depending on the number of available household workers. There are a few industries, however, which show a wider range of fixed capital investment, namely, pottery which have units using less than Rs.50 and also over Rs.1000 worth of fixed capital; wiremeshing and handloom with the fixed capital range between Rs.100 to Rs.2500; blacksmithy and food products with fixed capital ranging among units between Rs.150 to over Rs.5000. In these cases, the differences are both on account of the size of production on the one hand and the nature of product on the other. The differences in size, and not so much in technology account for wide range of fixed capital investment in the case of pottery, wiremeshing, and handloom units. Units with low fixed capital are using different technology and making different products from the ones using larger amount of fixed capital in the case of blacksmithy and food products. Nevertheless, the relatively wider range of fixed capital investment does suggest the possibilities a range of technological and organisational choices in these products, while in others the opportunities for technological variations are rather limited.

While fixed capital investment reflects the technology of a unit, working capital is likely to follow the magnitude of production monotonously. Working capital used in the sample units is also rather small, the average for all units estimates to Rs.1745, even after including food products units with an

average working capital of Rs.28283 and oil products of Rs.4850. Working capital in most of the units consists primarily of funds required for purchase of raw material, the other important component of working capital, namely, wages, has a low value due to the predominance of unpaid family labour in employment. Thus the amount of working capital mainly reflects the quantum and value of raw material used. That is why handloom units have relatively high working capital at Rs.1211 and wiremeshing and ring making are the only other products in which a unit on an average uses a working capital of over Rs.500. On the other hand, units in matmaking, bamboo products, pottery toy making and rope making mainly use locally available free raw material, and thus the average working capital requirements of units in these activities came out to be very low, less than Rs.100 per unit. In other industries the value of working capital used ranged between Rs.100 and Rs.500 per unit.

Interrelationship between Employment, Output and Capital Size:
Inter-industry Comparison

The relationships between sizes of output, employment and capital across the industries are hardly consistent. Bamboo products, mat making, rope making and pottery units have low values of all variables, number of workers employed, value of output, fixed capital and working capital per unit. Thus they are small-sized in every respect. Carpentry units are small in respect of employment and capital but have output value of somewhat higher magnitude, Rs.8580 per unit. Units in leather and toy making are small sized in terms of capital, both fixed and working, but have

relatively medium size in terms of employment and output; and units making bidis show a high average size in employment and output despite relatively low requirements of both fixed and working capital.

On the other hand, wire meshing units are medium-sized in terms of employment, fixed and circulating capital, but have high value of output per unit. Bead making units are medium-sized in terms of fixed capital and output, but larger-sized in terms of employment and small-sized in terms of working capital. Food products units are large-sized in terms of employment, output and capital but oil mills are large-sized in respect of output and capital but small-sized in terms of employment. Handloom units are large in all respects except fixed capital and hubbrush and lamp shade units are large sized in employment, and output but not in capital. Ring making units are medium-sized in terms of capital but have relatively larger size of output and employment. Blacksmithy shows low employment and working capital but high output and fixed capital per unit.

If one is interested in identifying industries which use small capital, particularly fixed capital, but provide larger employment and output, hubbrush making, lampshade and bidi making turn out to be the most suitable candidates, all with high levels both of employment and output, followed by leather, toys and wire meshing at medium level of employment but reasonably high levels of output, and ring making with medium-sized capital but larger size of

output and employment. Food products have high value of every thing; and oil products of all variables except employment, and handlooms all variables except working capital. These comparisons, however, do not give us a precise idea of the employment and income generating capacity of the units unless we also take into account person days of employment and also values of production and capital per worker. Such an exercise is undertaken subsequently.

CHAPTER IV

Employment, Output and Productivity

There is no doubt that the employment generated per unit of capital is very high in rural industrial units, but total employment per production unit is rather small. A rural industry unit is found to employ about 4 workers on an average. It must, however, be noted that the household character of these units limits the number of workers to the size of workforce in the family. In fact, a comparison of average size of family and average number of workers per unit among different industry groups reveals a close correspondence between the two. This phenomenon, however, may indicate one of the following two situations: the size of industrial units is dependent on the size of family workforce implying that a larger size of family might have also have led to an increase in the size of units' operations; or, the industrial activity being the sole or main activity of the household, all the workforce of the household has to be absorbed in the unit irrespective of the intensity of employment and productivity. In most cases, the latter explanation seems more valid than the former. It is, therefore, of interest to examine whether these units absorb the household workers, rather than employ them productively. This question can be examined on the basis of intensity of employment, in terms of persondays of work of those engaged in these units, and then, of productivity and incomes per worker.

Intensity of Employment

The question of intensity of employment is important primarily in the case of the unpaid family labour. The hired labour constitutes a relatively small proportion, and most of it is to be found in the activities of more regular and perennial nature and carried out mostly in the larger-sized non-household units. Therefore, it can be assumed that the wage labour engaged in these units work full-time and throughout the year. But for the unpaid family workers also, as we have seen earlier, work in household industrial units constitutes sole or main activity in most cases. It is, therefore, not surprising to find that the household workers engaged in the rural industrial units work for most part of the year in the industrial unit: the average being 288 days in a year (Table IV:1). In some of the activities, the workers seem to be working for almost all days of the year, without any break. Thus, oil mills engage the household workers on an average for 352 days in a year, lamp-shade making units for 345 days and handlooms for 325 days.

Bamboo basketry, carpentry, hubbrush making, ring making, black-smithy, toy making and bidi making provide employment to household workers for around 300 days in a year. Other industries also do not seem to be doing very badly on this criterion. Pottery, leather work, bead making, matmaking and rope provide less than 280 days of work to their household workers, but the lowest in these cases is still 233 in rope making. Workers belonging to bead-making households are also engaged in cultivation as a main

Table IV:1Persondays Worked by Household Workers

Industry	Persondays in a year (Number of Workers)					
	Less 150 than 200 150	- 200 - 300	- 300 - 325	- 325+	Average person days	
1. Bamboo products	3	1	64	30	68	300
2. Pottery	11	28	131	23	7	246
3. Wiremeshing	-	2	17	11	22	292
4. Leather products	7	15	22	55	1	252
5. Handloom	1	-	17	13	79	325
6. Beadmaking	1	8	26	10	13	265
7. Carpentry	4	2	7	3	32	305
8. Hubbrush making	1	2	50	14	10	292
9. Lampshade manufacturing	-	-	10	-	54	345
10. Food products	-	3	14	16	12	301
11. Matmaking	2	-	15	10	7	279
12. Ring making	2	1	11	7	20	302
13. Blacksmithy	-	-	9	3	12	310
14. Oil products	-	-	2	4	18	352
15. Toy making	-	1	3	7	10	307
16. Rope making	-	2	9	1	-	233
17. Bidi making	-	-	3	2	3	300
ALL	32	65	410	209	368	288

or subsidiary occupation to a significant extent. In pottery, matmaking, leather and rope making, however, it reflects a situation of underemployment, as there is no other work that workers are carrying out as their subsidiary or main activity. In matmaking, the male members of the household are engaged in ferrying by boats, but women who engage in matmaking do not participate in that activity. Some of the members of leather work households do take up wage labour for part of the year, but that is because their main activity does not provide them full employment. To a certain extent it is also true of workers belonging to potters' families. All workers of the households engaged in rope making, however, have it as not only as their main but the sole activity, they are engaged in no other activity even on a subsidiary basis.

Of all the household workers engaged in the sample units, 53 per cent are found to have full employment in terms of time, as they work for over 300 days in a year in these units. The percentage of such workers is high in wiremeshing (63%), handloom (84%) carpentry (73%), lampshade manufacturing (84%), oil mills (87%), and toy making (83%). On the other hand, 9 per cent workers are highly underemployed, insofar as the industrial units provide them work for less than 200 days in a year. Such underemployed household workers constitute a significant proportion in pottery (25%), and leather (22%).

Productivity

Average value added per worker for all activities together turned out to be Rs.2206, despite the high figures shown by food products (Rs.10515) and oil mills (Rs.4165). In any other activity value added per worker did not exceed Rs.2400 except in wire-meshing where it turned out to be Rs.3146. Activities having a productivity figure exceeding Rs.1800 are : carpentry (Rs.2243), blacksmithy (Rs.2168), lampshade (Rs.2038) and handloom (Rs.1942). Of those showing a figure of less than Rs.2000, pottery, leather, bead making, carpentry and bidi making units generated an average value added between Rs. 1200 and Rs.1800 per worker. But bamboo products, matmaking, ring making, toy and rope units failed to provide a value added of even an average of Rs. 100 per month to the workers engaged in them. Given very small amounts of capital investment, and household operations as the predominant mode of production, one can assume that the share of capital in value added is negligible and, therefore, value added more or less exclusively consists of labour income either in the form of wages or of per worker household income. Also given the fact that most workers have work in these units as their sole activity, this income is virtually the only source of their livelihood. On this basis one can look at the extent to which the different industries are capable of providing the means of subsistence and living to the workers engaged in them. As indicated in Chapter II earlier Rs.60 per capita per month expendi-

ture could be taken as minimum necessary for the fulfillment of subsistence needs in the area studied at current (1978) prices. Further, from our data we get a crude activity rate of 50 per cent, thus yielding a dependency ratio of 2. On this basis an income level of Rs. 120 per month and Rs.1440 per annum per worker would work out to be the minimum to maintain the workers' families. On this criterion, the industries which fail to meet the requirement are : bamboo products, beadmaking, matmaking, ring making, toy and rope making. Leather and bidi making, just reach the minimum point and pottery is only marginally above the point. As we have seen earlier, beadmaking and matmaking households, however, have mostly some other activity also to contribute to the income of the family.

Employment-Productivity Relationship: Inter-Industry Comparison

One direct determinant of labour productivity and, therefore, workers' income would be the number of days a worker is employed in the respective activity, on an average. In the present case no such direct relationship is discernible. Oil mills, lamp-shade, handloom and rope making units provide employment of over 325 days per year to the household workers engaged in them, the first three also have relatively high labour productivity, but rope making has one of the lowest average productivity. Blacksmithy, toy making, carpentry, food products, ring making, and bamboo products also provide relatively high employment intensity; of them while food products, of course, have a very high labour

productivity, blacksmithy and carpentry also have relatively high figure, but ring making, toy making and bamboo products have very low value added per worker. Wiremeshing, hubbrush making, and matmaking have average employment intensity per worker; of them wiremeshing have a quite high, hubbrush making about average, but matmaking the lowest productivity per worker. Pottery, leather and bead making both have low employment intensity but labour productivity is not necessarily low. Thus overall a very weak relationship is found between employment intensity and value added per worker. Coefficient of correlation between average mandays of employment and value added per worker worked out positive but very low and insignificant (0.2564). Thus a longer duration of employment does not necessarily lead to increase in income; in fact, in quite a few rural industries the relationship is reverse. There is no reason as to why it should be so, but it could certainly be surmised that productivity is quite significantly determined by factors other than the amount of labour time spent in production.

More than the persondays of employment, it is the amount of capital investment per worker which is found to be associated with value added per worker, and, therefore, with the income potential of rural industries. As noted earlier, except for food products and oil units, the amount of capital, fixed as well as working, is rather small. Fixed capital per worker is found to be less than Rs.50 in bamboo products, lampshade, matmaking,

Table IV:2Productivity and Capital Intensity

Industry	Value added per worker (Rs.)	Fixed capital per labour (Rs.)	Total capital per labour (Rs.)	Fixed capital to output	Total capital to output
1. Bamboo products	1049.32	21.34	39.52	0.02	0.03
2. Pottery	1531.70	67.62	95.06	0.05	0.07
3. Wiremeshing	3146.15	198.70	374.03	0.02	0.05
4. Leather products	1444.54	73.36	159.30	0.02	0.05
5. Handloom	1941.91	148.83	409.66	0.03	0.08
6. Beadmaking	1234.26	164.96	208.51	0.09	0.11
7. Carpentry	2243.40	130.00	211.30	0.04	0.06
8. Hubbrush making	1676.87	22.01	101.49	0.01	0.03
9. Lampshade manufacturing	2037.50	11.28	102.13	0.003	0.03
10. Food products	10514.84	3319.29	9379.93	0.05	0.13
11. Matmaking	511.61	14.71	27.48	0.02	0.05
12. Ring making	1114.10	176.00	304.92	0.05	0.09
13. Blacksmithy	2167.86	859.18	1046.96	0.13	0.16
14. Oil products	4165.67	6310.71	7506.67	0.20	0.26
15. Toy making	1088.74	20.53	46.32	0.01	0.02
16. Rope making	1175.00	11.67	27.00	0.01	0.02
17. Bidi manufacturing	1439.75	24.60	79.60	0.01	0.03
ALL	2206.08	412.49	879.74	0.05	0.11

hubbrush making, toy making, rope making and bidi units; between Rs.50 and Rs.100 in pottery and leather; between Rs.100 to Rs.200 in wiremeshing, handloom, beadmaking, carpentry, and ring making; Rs.858 in blacksmithy, Rs.3319 in food products and Rs.6311 in oil mills. Total capital per worker is less than Rs.100 in bamboo basketry, pottery, mat making, toy, rope and bidi units; between Rs.100 and Rs.300 in ring making, Rs.1047 in blacksmithy, Rs.7507 in oil products and Rs.9380 in food products. Value added per worker is consistently found to be related with capital per worker, both fixed and total, but more particularly with total. Coefficient of correlation of value added per worker with fixed capital per worker worked out to 0.7101 and with total capital per worker 0.9435.

To sum up, the inter-industry comparisons of employment intensity and productivity attempted above suggest the following propositions: (i) Most of the rural industries absorb practically all the labour available with the households engaged in them; the absorption is not merely of time-sharing kind in so far as these industries provide work to most of those engaged in them for almost the whole year. Thus on time criterion, the households engaged in them do not suffer from unemployment among their members and the absorption in these industries is not characterised by severe underemployment.

(ii) A sizeable part of the rural industrial sector is, however, characterised by disguised unemployment on productivity and

income criteria. Value added per worker, which could be taken as the income of workers engaged in these industries, is lower than prevailing statutory minimum wage fixed for rural workers in many cases. Despite virtual full employment, the workers are not able to earn, therefore, an income which could meet their minimum needs.

(iii) Inter-industry comparison also reveals that a larger number of days of work does not necessarily result in proportionately larger value added. Technological conditions of different industries, lead to differences in value added per worker. In fact, productivity is directly related with the magnitude of capital per worker used in different industries.

Determinants of Production and Productivity at Unit Level

Let us now look at certain relationships at the level of individual industries on the basis of inter-unit analysis. Specifically, we would attempt to seek answer to the following questions in case of each industry : is an increase in size of employment in a unit accompanied by an increase in output and value added? What is the relationship of the amount of capital invested with size of output and value added on the one hand, and employment generated on the other? What are the relative contributions of employment and capital to value added? What are the relationships between productivity, in terms of output and value added per worker, to the size of unit in terms of employment

output and capital? Findings relating to these questions would help us to identify the appropriate strategies needed to make different industries more effective in providing increase in incomes and employment.

Statistical analysis, applying regression techniques has been carried out for the purposes of studying the interrelationships among different variables at the unit level in different industries. The statistical exercises are confined only to 14 industries which have more than 10 units each in the sample.* Thus three industries, toy making, rope making and bidi making have been left out of this exercise.

(i) Output, Employment and Capital

The first relationship that we have examined is between output and persondays of employment among units in each industry. The hypothesis implicitly being tested here is that larger number of persondays engaged in a unit does not necessarily lead to higher output, as the former merely reflects the accumulation of family labour in the household unit. In most industries (10 out of 14) we find the hypothesis rejected, persondays of employment generated is found to be positively and significantly related with the value of production turned out by a unit (Table IV:3). The relationship is found to be the strongest in wiremeshing, lampshade and prayer mats in which an increase of one personday of employment is found to lead to an increase in output to the tune

Table IV:3

Relationship between Output and Employment

Industry	Equation	R ²
1. Bamboo products	$Y = 2947.5482 + 0.1704E$ (0.2916)	0.0012
2. Pottery	$Y = 861.1561 + 4.8717E^{**}$ (8.4854)	0.4346
3. Wiremeshing	$Y = -17324.5990 + 47.2105E^{**}$ (21.4662)	0.8910
4. Leather	$Y = 4518.296 + .30781E^{**}$ (8.48207)	0.72711
5. Heandloom	$Y = 13792.3640 + 0.1628E$ (.64469)	0.57655
6. Beadmaking	$Y = -1125.1175 + 8.6568E^{**}$ (13.1714)	0.7862
7. Carpentry	$Y = 2363.0524 + 7.5755E$ (1.8880)	0.1172
8. Hubbrush Making	$Y = 9501.2294 + 0.13533E^{**}$ (5.5969)	0.57655
9. Lampshade manu- facturing	$Y = -26355.4832 + 30.1912E^{**}$ (6.2631)	0.8910
10. Food products	$Y = 62237.0875 + 0.74538E^{**}$ (6.6785)	0.70450
11. Prayer mats (Aasan)	$Y = 824.0403 + 22.2288E^{**}$ (48.2005)	0.5695
12. Ring Making	$Y = 811.2199 + 11.4188E^{*}$ (2.3990)	0.5180
13. Blacksmithy	$Y = 19717.7931 - 1.7033E$ (0.0589)	0.0004
14. Oil products	$Y = 35174.6205 + 1.3576E^{**}$ (3.3962)	0.5904

Figures in brackets are 't' values of the coefficients.

** = significant at 1 per cent

* = significant at 5 per cent

Y = value of output

E = persondays of employment

of Rs.47, Rs.30, and Rs. 22 respectively. The industries in which the relationship between employment and output is found to be absent are : carpentry, blacksmithy, bamboo products and handloom. In these industries, employment thus seems to be characterised by disguised unemployment and time-sharing. In most industries, a significant positive relationship is also found to prevail between output and capital (Table IV:4). In 11 out of 14 industries this relationship is found to be significant across units. Thus an increase of Re.1.00 in capital leads to increase in output by Rs.22 in oil products and handlooms, Rs.403 in food products, Rs.21 in matmaking, Rs.12 each in carpentry and hubbrush making, Rs.9 in pottery, Rs.6 in blacksmithy and leather, Rs.58 in lampshade and Rs.36 in wire-meshing. In other industries also the relationship is positive but not significant at 95 or higher level of confidence. What is also significant to note is that in most of these industries persondays of employment are also positively related with capital employed (Table IV:5). In pottery, matmaking, beadmaking, lampshade, wiremeshing, handloom and food products, increase in capital is found associated with increase in output, as well as in employment. In carpentry, blacksmithy, and leather products increase in capital leads to increase in output, but not in employment; and in bamboo products and ring making, it increases employment, but not output; and in hubbrush making, and oil products no relationship of capital is found independently with either output or employment.

Table IV:4

Output Capital Relationship

Industry	Equation	R ²
1. Bamboo products	$Y = 2513.8452 + 5.6667C$ (1.2545)	0.0210
2. Pottery	$Y = 2721.9750 + 9.0017C^{**}$ (9.8322)	0.5031
3. Wiremeshing	$Y = -17642.3401 - 35.5493C^{**}$ (12.1452)	0.5031
4. Leather products	$Y = 4826.02710 + 6.03353C^{**}$ (4.45520)	0.42367
5. Handloom	$Y = -9971.7534 + 21.93405C^{**}$ (5.84078)	0.56749
6. Beadmaking	$Y = -1491.2654 + 12.1093C^{**}$ (16.9670)	0.8567
7. Carpentry	$Y = 1106.8934 + 12.4798C^{**}$ (9.8322)	0.5890
8. Hubbrush Making	$Y = 9590.7536 + 4.77330C$ (2.01592)	0.15016
9. Lampshade Manufacturing	$Y = -8347.8200 + 58.4463C^{**}$ (24.4695)	0.6160
10. Food Products	$Y = 257502.840 + 403.9072C^{**}$ (12.07333)	0.90669
11. Prayer Mats (Aasan)	$Y = 110.2383 + 21.2288C^{*}$ (2.8409)	0.5647
12. Ring Making	$Y = 15398.3241 + 0.4589C$ (0.0661)	0.0005
13. Blacksmithy	$Y = 1949.6150 + 5.7298C^{**}$ (5.7174)	0.8288
14. Oil products	$Y = 64647.2337 + 21.6365C$ (0.50435)	0.03081

Figures in brackets are 't' value of coefficients.

** = significant at 1 per cent

* = significant at 5 per cent

Y = value of output

C 1 total capital

Table IV:5

Employment-Capital Relationship

Industry	Equation	R ²
1. Bamboo products	E = 324.8162 + 4.3448C** (6.1719)	0.2802
2. Pottery	E = 620.2329 + 0.9823C** (6.5141)	0.3254
3. Wiremeshing	E = 33.9717 + 0.7245C** (19.1502)	0.8675
4. Leather products	E = 835.3999 + 0.006966C (0.09116)	0.000307
5. Handloom	E = 632.08165 + 0.21111C** (4.81827)	0.47181
6. Beadmaking	E = 194.9205 + 1.1706C** (12.5055)	0.7632
7. Carpentry	E = 883.5864 - 0.09845C (0.5626)	0.0180
8. Hubbrush making	E = 1585.23603 - 0.05402C (0 19047)	0.47181
9. Lampshade manufacturing	E = 926.8400 + 1.2066C** (7.3274)	0.6604
10. Food products	E = 796.2584 + 0.00885C** (8.82151)	0.83839
11. Prayer Mats (Aasan)	E = -86.3256 + 9.9750C* (2.9214)	0.5754
12. Ring making	E = 376.5889 + 0.6836C** (3.6544)	0.6755
13. Blacksmithy	E = 845.3118 - 0.0329C (1.3724)	0.2948
14. Oil products	E = 878.8678 + 0.00555C (0.44915)	0.02459

Figures in brackets are 't' value of coefficients

** = significant at 1 per cent

* = significant at 5 per cent

E = Persondays of employment

C = Total capital

How does the size of value added generated in a unit change with variations in persondays of employment and fixed capital? Basically one would assume that increase in employment should lead to an increase in value added, but such relationship should be stronger if it is also accompanied by an increase in investment in fixed capital. Results of regression analysis (Table IV:6) reveal four categories of relationships. First, in three industries, namely bamboo products, leather and oil products the two variables are not found to explain the interunit variations in value added. Second, in three industries pottery, wiremeshing and beadmaking both the variables yield a significant coefficient. Third, in handloom, carpentry, lampshades, food products, prayer mats and ring making, persondays of employment alone explain a sizeable proportion of inter-unit variation in value added, fixed capital showing no relationship of significance. In hubbrush, the same situation prevails, but the proportion of variation explained is rather small. Fourth, in one industry, namely, blacksmithy, the fixed capital alone explains almost the entire variation in value added, employment, in fact, showing a negative though insignificant relationship. For augmenting the size of value added generated by a unit, increase in employment thus seems a necessary condition in 10 industries, (three in the second and seven in the third category); in seven of them of the third category, it also seems a sufficient condition, while in the three of the second category it needs to be accompanied by increase in fixed capital also. Increase in fixed capital alone

Table IV:6

Contribution of Employment and Fixed Capital
to Value Added

Industry	Equation	R ²
1. Bamboo products	$V = 2461.5616 + 0.0243E + 0.9249K$ (0.0584) (0.1420)	0.0005
2. Pottery	$V = 1195.0184 + 3.2995E^{**} + 5.6627K^{**}$ (6.2392) (4.1281)	0.7264
3. Wiremeshing	$V = 5526.6149 + 22.3348E^{**} + 5.404K^{*}$ (19.1156) (2.6199)	0.9077
4. Leather products	$V = 3373.52501 + 1.32865E + 0.160062K$ (1.6443) (0.49931)	0.1029
5. Handloom	$V = -7052.58171 + 10.4797E^{**} + 0.07624K$ (5.06245) (0.06932)	0.5244
6. Beadmaking	$V = -301.0603 + 3.8361E^{**} + 3.5430K^{**}$ (8.0832) (3.6484)	0.8781
7. Carpentry	$V = -607.9043 + 4.7631E^{**} + 2.6966K$ (3.1893) (1.3251)	0.5395
8. Hubbrush making	$V = 4088.36541 + 2.99117E^{*} + 0.93391K$ (2.742820) (0.53653)	0.2570
9. Lampshade manu- facturing	$V = 21255.8632 + 22.1785E^{**} + 0.1333K$ (6.6605) (0.0010)	0.7590
10. Food products	$V = -36166.3681 + 68.76748E^{**} - 0.327924K$ (3.55548) (1.10937)	0.7069
11. Prayer Mats (Aasan)	$V = 744.7374 + 1.0380E^{*} - 0.4419K$ (2.2665) (0.0293)	0.4231
12. Ring Making	$V = 6297.3852 + 6.4781E^{**} - 8.3548K$ (3.3814) (1.5033)	0.8511
13. Blacksmithy	$V = 8362.6844 - 8.4626E + 2.2534K^{**}$ (1.1348) (8.5660)	0.9433
14. Oil products	$V = 8960.51787 + 0.22794E + 0.16759K$ (0.03734) (0.62521)	0.05561

Figures in brackets are 't' values of the coefficients.

** = significant at 1 per cent

* = significant at 5 per cent

V = value added

E = Persondays of employment

K = Fixed capital

would lead to an increase in value added in blacksmithy. Neither employment increase nor augmenting fixed capital, however, seems to be of help in raising value added in bamboo products, leather and oil products.

(ii) Output and Value Added Per Worker

The main purpose of our exercise in this part is to examine whether productivity in terms of output and value added per worker bears a relationship with the size of unit in terms of employment, capital and output. First we have attempted the relationship of output per worker with total capital per unit and person-days of employment. Earlier we found output of a unit positively and significantly related with persondays of employment, but output per worker is found either negatively related or having no significant relationship with persondays of employment. The only industry where the output per worker is found to be positively and significantly related with persondays of employment is wire-meshing, where increase by one manday of employment is found to lead to an increase of Rs.6.5 in output per worker. Strangely, in a number of industries, pottery, bamboo products, beadmaking and lampshades, the persondays of employment are found to be negatively related with output per worker in a significant way. The positive relationship between total mandays and total output of units, combined with negative relationship or absence of relationship between persondays of work and per worker output suggests that

increase in mandays is shared by larger number of workers, so that though the total output increases, but less than proportionately with the number of workers, implying thereby a positive but declining marginal productivity of workers.

In most industries, however, total capital used in a unit is found to be directly and significantly related with output per worker. So that an increase in total capital by Re.1 is found to generate an additional output of Rs.6.49 in lampshade manufacturing, Rs.4.84 in carpentry, Rs.2.97 in blacksmithy, Rs.1.17 in pottery, Rs.1.38 in bamboo products, Rs.1.17 in beadmaking, Re.0.58 in handloom, Rs.1.46 in hubbrush making and Re.0.23 in food products. The implications of these findings are that while increasing number of workers and persondays of work does lead to increase to total output of a unit, but to increase per worker output the capital base in most of the industries needs to be strengthened. Declining marginal productivity of labour seems to have set in which could be checked and output per worker increased only by an increase in capital used in the units in most of the industries. In wiremeshing, the only industry where increase in persondays is accompanied by an increase in output per worker, capital is negatively related with the dependent variable. Here it looks that labour has an increasing but capital a declining marginal productivity.

Table IV:7

Determinants of Output per Worker

Industry	Equation	R ²
1. Bamboo products	$Y_1 = 1945.0339 - 1.0346E^{**} + 1.3775C$ (3.3250) (0.8260)	0.4507
2. Pottery	$Y_1 = 1942.7762 - 0.7390E^{**} + 1.1670C^{**}$ (2.7231) (2.9323)	0.3298
3. Wiremeshing	$Y_1 = 3303.8860 + 6.5110E^{**} - 2.3510C^{**}$ (12.6754) (4.8990)	0.7424
4. Leather products	$Y_1 = 3530.4534 - 1.9593E - 0.004696C$ (0.43419) (0.02286)	0.0072
5. Handloom	$Y_1 = 2251.745 - 0.2573E + 0.58212C^{**}$ (0.02069) (2.92828)	0.2675
6. Beadmaking	$Y_1 = 1241.8045 - 0.4284E^{**} + 1.1706C^{**}$ (3.6353) (9.2497)	0.6814
7. Carpentry	$Y_1 = 1275.3979 - 1.1424E + 4.8390C^{**}$ (0.6126) (13.4192)	0.9243
8. Hubbrush making	$Y_1 = 3108.0946 - 2.55784E + 1.4616C^{**}$ (0.28243) (3.0833)	0.3018
9. Lampshades Manufacturing	$Y_1 = 2842.16825 - 1.8060E^{**} + 6.4920C^{**}$ (3.3810) (16.1849)	0.9350
10. Food products	$Y_1 = -143127.835 + 588.9078E + 0.2264C^*$ (1.87027) (2.3495)	0.6592
11. Prayer Mats (Aasan)	$Y_1 = 333.1478 - 0.0451E + 4.6075C$ (0.1657) (1.0956)	0.0855
12. Ring making	$Y_1 = 5275.3161 + 1.2174E - 2.5095C$ (0.9708) (1.7603)	0.4692
13. Blacksmithy	$Y_1 = 14778.0210 - 20.7880E + 2.9740C^{**}$ (1.4659) (5.2006)	0.8989
14. Oil products	$Y_1 = 92073.9772 - 201.86611E + 0.2609C$ (1.2265) (0.5686)	0.3417

Figures in brackets are 't' values of the coefficients.

** = significant at 1 per cent

* = significant at 5 per cent

Y₁ = value of output per worker

E¹ = Persondays of employment

C = total capital

More than output per worker, it is the value added per worker which needs augmenting, for it provides the direct measure of income that the persons engaged in these industries would derive from their employment. No doubt, the two variables would most often go together. Yet is worthwhile to look at value added per worker independently, as the value added to output ratio differs significantly among industries and it may be hypothesised that value added per worker would also vary with the size of operations of production. In the exercise to explain variables in value added per worker among units in different industries we have taken three indicators of the size of units: output, capital and number of workers. The last variable is, of course, the denominator of the dependent variable, and as such would show a negative relationship with it, as it does in all cases although not always significantly (Table IV:8). What is of particular significance in this exercise is the fact that in all industries output size is positively and significantly related with value added per worker. The obvious implication of this findings is that the capacity of the units to generate higher incomes for those engaged in rural industries, is invariably a function of the size of production that they turn out.

Conclusion

Thus, if the main objective of the development of these industries is to augment their income potential per worker, the most obvious need is that of raising the levels of output per unit.

Table IV:8

Determinants of Value Added Per Worker

Industry	Equation	R ²
1. Bamboo products	$V_1 = 876.4077 + 0.2765Y^{**} + 2.6922C - 368.7119W^{**}$ (11.5196) (1.4181) (4.0753)	0.8821
2. Pottery	$V_1 = 1584.7373 + 0.2543Y^{**} - 0.7327C - 340.7760W^{**}$ (12.5549) (2.2975) (6.6473)	0.8918
3. Wiremeshing	$V_1 = 4078.8242 + 0.0987Y^{**} + 0.6231C^* - 1283.6738W^{**}$ (20.6998) (2.5165) (15.1064)	0.8465
4. Leather	$V_1 = 1780.0488 + 0.1535Y^* + 0.04669C - 554.2823W^{**}$ (2.38589) (0.74770) (3.7829)	0.71006
5. Handloom	$V_1 = 1872.8154 + 0.07532Y^{**} - 0.1588C - 259.3946W$ (3.6819) (0.98649) (1.50389)	0.4518
6. Beadmaking	$V_1 = 1478.7441 + 0.0872Y^{**} - 0.2995C^{**} - 129.5127W^{**}$ (14.1063) (3.1738) (1.4517)	0.7928
7. Carpentry	$V_1 = 2184.4416 + 0.1425Y^{**} - 0.6555C - 506.8485W^*$ (7.6056) (1.991) (2.2918)	0.7448
8. Hubbrush making	$V_1 = 1883.3386 + 0.06241Y^{**} - 0.26132C^* - 180.3457W^{**}$ (8.04561) (2.2754) (7.74302)	0.8027
9. Lampshades Manufacturing	$V_1 = 1334.9247 + 0.0529Y^{**} + 0.49997C^* - 141.3756W$ (23.8592) (2.4808) (1.4517)	0.9773
10. Food products	$V_1 = 6141.9203 + 0.00724Y^* + 0.040556C - 741.6867W$ (0.52791) (0.85643) (0.35561)	0.30571

Industry	Equation	R ²
11. Prayer mats (Aasan)	$V_1 = 436.5337 + 0.4106Y^{**} - 1.5195C - 170.7117W$ (6.5950) (0.3769) (1.2932)	0.9457
12. Ring Making	$V_1 = 1683.1323 + 0.1020Y^{**} + 0.2646C - 405.5943W^{**}$ (6.5870) (0.4209) (3.3049)	0.8877
13. Blacksmithy	$V_1 = 5424.5226 + 0.0697Y^{**} + 0.3701C + 1808.4697W$ (4.8354) (2.2587) (1.1873)	0.9706
14. Oil products	$V_1 = 9507.5586 + 0.05886Y^{**} - 0.7508C - 1904.2254W$ (2.91320) (1.87845) (3.24745)	0.7264

Figures in brackets are 't' values of the coefficients.

** = significant at 1 per cent

* = significant at 5 per cent

V_1 = value added per worker

Y = value of output

C = total capital

W = number of workers

The relationship between the output of size units and value added per worker is the most widely observed relationship in our exercise. Increase in output size can be brought about by increasing labour input or capital input or both. We find that even in the given technological conditions of production most industries would generate larger volume of output per unit by using more labour. Only industries in our sample which do not seem capable of doing so are : carpentry, blacksmithy, bamboo products and handlooms. In carpentry, blacksmithy and handlooms augmentation of capital seems necessary to raise the size of output, which may also imply necessity of some technological improvements. Bamboo products is a case where neither more labour nor more capital seems capable of augmenting its income generating potential. Increase in employment in terms of person-days of work which brings increase in value added per worker in most industries is generally, found to be a function of capital employed.

Increase in capital size could also directly result in increase in output size in all industries except bamboo products, ring making, oil products and hubbrush making. Thus in most industries augmentation of capital would lead to larger output per unit and value added per worker through larger and more efficient utilisation of labour. Industries where capital augmentation will lead to the sequence of larger employment, larger total output and high income per worker are : pottery, matmaking,

ring making, beadmaking, lampshade manufacture and wiremeshing. Industries where increase in capital would lead to higher value added per worker by enlarging the size of output but without increase in employment are : carpentry, blacksmithy, handloom and leather products. Oil products will have higher value added per worker with increase in output size, and output size would increase with increase in employment for which increase in capital is not a necessary condition. The same is the case with hubbrush units. Food products units would generate higher output and employment with augmentation of capital but that may not necessarily result in higher value added per worker.

Another point to note is that number of workers and value added per worker are inversely related with each other in all industries, in most of them significantly. In a way this is a purely arithmetic relationship. But since persondays worked are positively related with value added per worker, the implication that can be drawn from this finding is that utilisation of the workers already engaged in these units more intensively will be more appropriate strategy to raise the levels of income per worker, rather than adding more workers without increasing the capital size of the units. Further, our findings relating to a positive relation between value added per worker and output size of the units suggests that strengthening of the existing units, as opposed to proliferation of units with very smallturnover, would provide more effective employment in terms of income to those engaged

in these rural industries. Strengthening in most cases would imply augmentation of total capital used in the units. It may be pointed out that the capital invested per unit is so small in most industries, that increase in capital required to bring the units to a viable size would not mean heavy investment in absolute terms. No doubt it would increase capital intensity of employment, but still be infinitesimally low as compared to the large and urban industries. Further a major part of increase in capital is in fact required for raw material, and only in a few industries, e.g. carpentry, blacksmithy, handloom and leather, investment in fixed capital would take a sizeable chunk of additional capital.

CHAPTER V

Growth Performance, Problems and Plans for Expansion

In the present chapter we attempt a portrayal of the pattern of growth of units in different industries in the recent past, an analysis of the factors that facilitated and the problems that have hindered growth, and a description of the entrepreneurs' own assessment of their plans for expansion and its requirements. It has been rather difficult to obtain information on the growth of output in physical and value terms from the units over a period of time. Consequently, the analysis of growth has been confined to only 247 units which could supply usable information, and to only a three-year period, 1976-78, for which they could give relatively reliable information. But we hope that despite this limitation, the findings would not be far from what could be obtained if the data were available from all units and for a relatively longer period. No growth in employment in terms of number of persons engaged was reported by the responding units. Only 11 units reported some growth and only 21 units, mostly these reporting growth in physical volume of output, in working capital. It was not found of much interest and use, therefore, to analyse the growth in capital, and the analysis, therefore, is attempted in terms of output growth only.

Growth of Output

A look at the record of output of the units in our sample presents a picture of stagnation in most rural industries: 70

per cent units reported no growth in physical volume of their output; the percentage of those reporting no growth in value terms was 52 (Table V:1). Further, 27 per cent reported actual decline in physical volume and 22 per cent a decline in the output value. Only 30 per cent units reported growth in physical terms and 48 per cent in value terms. Thus more than increase in output it is the rise in prices of products which characterised the growth of rural industries.

Table V:1 Growth Performance of Rural Industrial Units (1976-78)

Product	% of units showing					
	Positive growth		Stagnation		Decline	
	Physical units	Value units	Physical units	Value units	Physical units	Value units
Bamboo products	26	54	57	34	17	12
Pottery	16	48	56	40	28	12
Wiremeshing	12	36	44	32	44	32
Leather	28	36	16	16	56	48
Handloom	31	56	31	12	48	42
Beads	52	80	36	12	12	8
Carpentry	48	52	52	48	-	-
Hubbrush	85	92	8	8	65	90
Lampshades	8	10	27	0	73	100
Matmaking	18	27	55	45	27	28
Food products	66	66	22	11	12	23
Ring making	25	25	63	63	12	12
Blacksmithy	-	36	84	36	28	16
Oil products	29	86	57	14	14	-
Toys	50	50	50	50	-	-
Rope making	50	50	50	50	-	-
Bidi making	25	75	50	25	25	-
ALL	30	48	43	30	27	22

Industries in which a majority of units experienced growth of output both in physical and value terms are : beadmaking, hub-brush making, food products, toys and rope making. In bamboo basketry, handloom, carpentry, oil products and bidi making majority of units have had growth in value of their output, though only a small number experienced physical expansion of their output. Stagnation prevailed in majority of units in bamboo products, pottery, carpentry, matmaking, ring making, blacksmithy and oil products, in physical terms, though of these bamboo products, carpentry, and oil products gained in value terms. The cases of widespread decline in the output of units are provided by leather products, and lampshade making. Wire-meshing units are also mostly stagnating or declining, though a few have been growing both in physical and a sizeable number in value terms. Thus it is only in a few industries that the dominant trend has been toward an expansion of output, though quite a few have an increase in the value of their output on account of favourable trend in prices. But in a number of others, pottery, wiremeshing, leather, lampshade, matmaking, ring making and blacksmithy, majority of units failed to experience an increase in value terms also.

It is difficult to discern any distinct pattern among industries in terms of their growth in recent years. True, most of the traditional industries have either stagnated or declined in terms of physical output; but handlooms, carpentry, bamboo

basketry, and pottery seem to have good markets to the extent value of their output has increased more often than the physical output. On the other hand, new industries like wiremeshing and lampshade have shown stagnation and decline in most units, particularly due to the competition among the large number of units that have emerged in the area due to good return shown by these products earlier. Among traditional industries, leather units have shown a widespread decline in their output, due primarily to the non-availability of raw material as a result of the licensing system introduced recently by the District Board. Thus besides, the secular trend of decline in most old industries, different industries have different reasons contributing to their growth, stagnation or decline. We, therefore, turn now to the various reasons provided by the entrepreneurs for the good or poor performance of their units in the recent past.

Market

Taking the responses of the growing as well as stagnating and declining units together, market turns out to be the most important factor reported to influence the performance of the rural industrial units. Of those which experienced growth almost all (98%) mentioned better market as one of the reasons for their performance, while among those stagnating or declining 40 per cent ascribed their plight to the poor market. It is somewhat intriguing to note that in certain industries while all growing

units felt that better market facilitated their growth, those not growing find it as a constraint operating on their performance. Thus in carpentry, matmaking, blacksmithy and food products, while all growing units considered market as a favourable factor in their performance, most or all stagnating and declining units in these industries also found market as a factor contributing to their situation. In most other industries, however, the growing units find market a favourable circumstance for their growth, and is also not mentioned by many non-growing units as a constraint, implying thereby that market was generally favourable, but some units grew while others did not due to factors other than the market. Lack of market or marketing problems however, clearly seems a factor in lampshade manufacture where it does not feature as a favourable factor significantly among growing units while it does feature as a constraint in all the case of stagnating or declining units.

The question of marketing as a facilitating, and lack of it as a hindering factor in performance of rural industrial units, may be probed a little further at this stage by examining the pattern of their sales and realisation of the value of products in relation to their costs. On pattern of marketing we have information on two items: percentage sold on the basis of prior order, and sales effected in different locations. It can be generally hypothesised that the industries and units which are mostly providing goods on the basis of prior order, or find market for their goods

within the village would not have significant marketing problem, while those producing mostly for open market and compelled to go out of the village in the urban areas or use a middleman for the sale of their products would have a disadvantage.

All industries studied by us produce on prior order from their buyers to a larger or smaller extent (Table V:2). Manufacturers of beads supply the largest proportion (80%) of their output on order. Handloom, matmaking, blacksmithy and hubbrush units also sell over 50 per cent and wiremeshing, carpentry and lampshade units between 40 and 50 per cent of their output on this basis. Most units in these industries thus have an assured market for a large part of their output. Supply on prior order is negligible in bamboo products, leather products, food products, oil products, toys and rope. Pottery and bidi units also sell about one-fourth to one-third of their output on prior order basis.

The products of leather and carpentry units find their market exclusively in the village; while those of wiremeshing, beadmaking, lampshade, ring making, and matmaking exclusively in the urban areas. Oil mills also sell all their product at the production site though it may subsequently be marketed both in urban and rural areas by wholesalers and retailers. Bamboo products, pottery, handloom, food products, blacksmithy, toymaking, rope and bidi units sell their products in the village and in the urban areas in almost equal proportions. Use of middleman seem a general rule in selling mats; they are also used by a significant

Table V:2

Some Features of Markets and Marketing

Industry	% of out-put supplied prior order	Location Pattern of Sales				Urban sales	Average distance of market place (km)	Average number of units per month	Average expenditure on visits per month
		Within the village	In urban centre	In village and urban combined	With use of middleman				
Bamboo products	12.30	27	14	25	-	13.03	4.47	10.14	
Pottery	25.56	27	6	25	-	5.44	4.12	15.36	
Wiremeshing	40.81	-	31	-	6	13.68	3.58	7.00	
Leather	1.94	29	2	-	-	9.0	4.00	3.00	
Beads	79.64	18	1	9	7	22.78	1.33	12.61	
Carpentry	41.67	26	-	-	-	-	-	-	
Hubbrush making	50.00	-	13	12	-	39.70	1.44	44.24	
Lampshades	46.50	-	20	-	-	11.50	3.90	14.00	
Food products	7.65	6	1	11	-	26.62	20.83	20.83	
Matmaking	53.75	12	-	-	10	5.00	4.00	8.00	
Ringmaking	17.27	11	-	-	-	6.09	10.73	16.00	
Blacksmithy	57.73	7	4	-	-	6.50	4.25	14.25	
Oil mills	2.00	10	-	-	-	-	-	-	
Toys making	10.00	1	2	2	-	4.50	4.75	15.67	
Rope making	3.33	-	1	3	-	4.00	3.00	4.75	
Bidi making	30.00	2	2	-	-	4.00	3.00	4.00	
ALL	32.53	153	148	86	23	16.00	4.12	15.69	

number of units in handloom and wiremeshing. In no other industry, units are found selling through middlemen.

It may also be of interest to note the information regarding the average distance of the urban market where the units sell their product, the number of visits they have to make for this purpose and average expenditure per month incurred in these trips (Table V:2). It is found that the units which sell the part or whole of their product in urban centres, on an average, have the concerned urban market at a distance of 16 kilo meters; the hubbrush makers have to travel the longest about 40 kilo meters to sell their product, followed by manufacturers of food products (27 Km.) and handloom products (23 Km.). Producers of bamboo products, wiremeshing, beads and lampshades have the urban market centre at a distance between 10 and 20 kilo meters. These distances are primarily determined by the location of units, as the nearest urban centre is common in case of most of them, being either Varanasi or Gorakhpur. On an average a producer makes four trips to the market every month. Producers of food products, particularly bhujia, and ring markers make the most frequent visits, more than 10 a month, to the urban centre; handloom producers, and hubbrush makers, who have the longest to travel, visit the urban centre only once or twice a month. Producers of the rest of the items generally go to the urban market once a week for selling their products. On an average, a unit spends Rs.16 on travelling to urban centre for marketing its product. Hubbrush units spend the largest amount (Rs.44)

followed by food product units (Rs.21) and ring makers and toy makers (Rs.16). Potters, handloom weavers, lampshade makers, and blacksmiths spend between Rs.10 and Rs.15, and the rest below Rs.10 per month. Bidi makers spend the least (Rs.4.00) per month on travelling to urban area for marketing their product.

Market as a Constraint : An assessment

The ultimate test of the inadequacy or otherwise of the market and the marketing arrangements would lie in the realisation of revenue resulting from the sales of the product. If a product could be sold at a price reasonably higher than the cost of production, thus generating a surplus for the producer, it would be logical to assume that the market for that product is good and the marketing arrangements are also not such as would lead to appropriation of surplus by someone else than the producer. Of course, the amount of surplus may be low if the output size in physical terms is small. A comparison of realised price and cost per unit of physical output, and value of output would help besides in assessing the market of the product, also in examining whether low returns and incomes to the producers are mainly on account of the lack of market or of certain factors such as size, technology and physical productivity, within the production unit.

We have information on cost and price per unit for a limited number of items produced in various industries. We have chosen one item, usually the most important one, in each industry for

cost-price comparison. Costs include all paid out costs. Thus wages of hired labour are included but not the cost of unpaid family labour. In any case, cost of hired labour is rather small except in a few products, namely, wiremeshing, beadmaking, hub-brush, food products and bidi making.

Table V: 3 Costs and Prices in Different Industries

Industry	Item	Unit	Cost per unit (Rs.)	Price per unit (Rs.)	Cost per rupee of out- put (all items) Rs
Bamboo products	Baskets	One	0.87	4.75	0.18
Pottery	Pitcher	One	0.17	1.05	0.16
Wiremeshing	Wirenet	Lbs.	16.09	26.16	0.72
Leather	Chappals	Pair	9.00	16.00	0.52
Handloom	Sari (average)	One	18.00	27.00	0.67
Beadmaking	Heads	Kg.	10.14	14.00	0.64
Carpentry	Cots	One	26.00	55.60	0.46
Hubbrush making	Hub Brush	One	6.96	10.20	0.71
Lampshade	Lampshade (Ordinary)	One	6.00	10.00	0.55
Food products	Potboiled rice	Qtl.	110.00	133.25	0.88
Matmaking	Aasan	One	0.20	1.45	0.15
Ringmaking	Rings	Dozen	1.78	3.20	0.68
Oil mills	Mustard oil	Qtl.	819.00	1100.00	0.91
Blacksmithy	Locks	One	3.15	4.20	0.75
Toymaking	Toys (average)	One	0.08	0.17	0.46
Ropemaking	Rope	Kg.	0.76	3.00	0.24
Bidi making	Bidis	1000	8.80	12.00	0.72
ALL	-	-	-	-	0.76

By and large, price per unit is reasonably well above the cost per unit of output (Table V:3). Differences are primarily on

account of the nature of raw material, whether locally procured and collected as a free gift of nature, or purchased. That is why price of a bamboo basket is five times higher than its cost, the price of a earthen pitcher is six times higher than its cost; and one kilogram of rope fetches almost four times higher than its cost. The price of an aasan is seven times higher than its cost. On the other hand, there are products where part of the raw material used had to be purchased, though part of it could be procured by family labour, and also some intermediate products are used which have to be purchased. Chappals, hubbrush, lampshades, cots and toys, are the products in this category, in each of which the price fetched is around 60 to 75 per cent higher than the cost. Then there are products in which all raw material is bought and constitutes a high percentages of total cost. Therefore, price per unit exceeds its cost by less than 50 per cent, in case of handloom sarees, beads, potboiled rice, locks, mustard oil, wire-nets, and bidis.

Taking all items produced by an industry together and computing cost per rupee value of output, it is seen that most industries find good enough market for their products to generate a reasonable net revenue per unit of output value. Overall a rupee of output in the entire sample generates Re.0.24 surplus over cost, which constitutes the producers' income. As such the figure does not look reasonably high even though it primarily consists of the wage of unpaid family labour. But it is due to a

very high cost-price ratio in a few industries that the average net revenue per rupee of output for the samples as whole is low. Oil mills, food products, wiremeshing, hubbrush making, blacksmithy and bidi making have a cost-price ratio of over 0.70, not only because of larger element of purchased raw material but also because of the inclusion of wages of hired labour, which has a relatively high extent in these industries. Once major part of the wage cost is also paid a surplus of 20-25 per cent cannot be considered unreasonably low.

In rest of the industries the producers are able to realise around 40 to 80 per cent of the sale price as their own share. They are able to sell their products at a price ranging between 50 per cent to 500 per cent higher than the paid out costs. Thus on this score, it can be concluded that the market is not a severe constraint in the operation of the rural industrial units. The fact that units in all industries have been able to grow, in smaller or larger numbers, and ascribe their growth invariably to favourable market, also supports this contention. It is also evident from these findings that the low income per industrial unit and per worker in a number of industries is not a result of difficulty of selling the products at reasonable prices, but of the technological and organisational bottlenecks of raising the volume of production and productivity in each unit. Given higher levels of output per worker even a low surplus per unit of output could yield high value added and income per worker, as is the case in

wiremeshing, food products, blacksmithy and oil products. Even an average level of output per worker could yield a high income per worker due to favourable market conditions resulting in reasonably low cost-price ratio, in lampshade and carpentry units. But even favourable market indicated by low cost-price ratio could not raise the value added per worker from a very low level in the case of bamboo products, pottery, matmaking, and rope making, due to very low physical productivity. It is only in handloom, hub-brush making, ring making and bidi manufacture, where low value added per worker could be ascribed partly to low physical productivity, and partly to unfavourable market indicated by high cost-price ratio.

Raw Material

Next to market, it is the availability of raw material which featured as the most important factor in the performance of rural industrial units, according to the responses of their entrepreneurs. Around one-third of the growing units considered availability of raw material as a positive factor in their growth. In case of the stagnating and declining units raw material turned out to be the most important constraint: over two-thirds of such units ascribed their poor performance to the difficulties in obtaining raw material. While it did not feature as the outstandingly important factor in growth in any industry, its influence as a constraint on growth was found strong in bamboo products, leather products, handloom and broommaking, where practically all the non-

growing units attributed their plight to this factor. Even in other industries the largest number of stagnant or declining units reported having faced this problem except in carpentry, wire-meshing, lampshade manufacture, food products and blacksmithy.

The problem of raw material seems to have been faced not so much by industries which use non-local raw material, as by those that use locally procured or collected raw material. Thus producers of bamboo baskets find depletion of bamboo forests in the proximity of their operations as the reason for non-availability of raw material; even some of the pottery units are finding it difficult to locate land from which suitable clay could be procured due to the increasing paucity of unused land; and leather workers' problem has recently been created by the system of licensed contractors introduced by district authorities. On the other hand, wiremeshing, lampshades, hubbrush, carpentry and blacksmithy units using raw material mostly procured from the nearest urban centre, or other places do not seem to find raw material as an important constraint in their operations. Handloom and beadmaking units using non-local raw material are, however, facing this problem to a significant extent.

Finance

After market and raw material, finance featured as the most frequently mentioned factor as facilitating growth, or its lack as a constraint in growth. About 14 per cent of the growing units mainly in pottery, ring making, carpentry and wiremeshing

found availability of finance helpful in their recent growth. On the other hand, majority of the stagnant or declining units in wiremeshing, leather, handloom, lampshades, food products, blacksmithy, oil mills and bidi making considered lack of finance as one of the factors for their poor performance. Yet, on the whole, it was found that financial assistance or loans, from any external source were availed only by 12 per cent units in the sample. The three industries in which the units availed of external finance most often were leather, handloom, and ring making. In these industries 35 per cent, 43 per cent and 81 per cent units were found to have used loans for financing their activities. A few units in pottery, carpentry, hubbrush making, lampshade, food products, blacksmithy and toymaking also availed of loans.

Banks were the most often used source for loans; 60 per cent of the borrowing units used this source. In another 20 per cent cases, KVIC assisted the units and in the remaining 20 per cent cases they had to depend on the money lender. Money lender seemed the only source in case of pottery, food products, ring making, blacksmithy and bidi making. In leather, banks were used in most case, though in some KVIC also helped and in some others recourse had to be had to money lender. KVIC was the main source of assistance in the case of handloom units, though banks were also used in a significant number of cases.

The amount of loans taken were generally small. Leaving aside the food products units where average amount stood at over

Rs.1 lakh the average loan taken per unit was well below Rs.5000. In one case of blacksmithy unit, however, it was Rs.10,000. In pottery, leather and handloom the loan amounts averaged to less than Rs.1000; in ring making, hubbrush and bidi making units between Rs.1000 and Rs.2000; and, in bead-making and lampshade units between Rs.3000 and Rs.4000 per unit.

Although the number of units actually having availed of financial assistance from institutional sources is small, despite a large number of them complaining of lack of finance, it is encouraging to note that these sources have entered the field even if to a limited extent. One could argue that if banks and other institutions could finance a few units in these rural industries, they should not ordinarily find it difficult to finance a larger number of them. The fact that these institutions have found the activities suitable for lending is initially established by the example of a few units. It may, therefore, be hoped that the expansion of the rural industrial units in the area studied would not find the banks inaccessible for the required finance.

Expansion Plans and Requirements

The experience of the recent past and the problems that they have been facing seem to have dampened the enthusiasm of a significant number of entrepreneurs, in so far as entrepreneurs of 40 per cent units expressed themselves against expansion. The 'non-expansionists' dominated beadmaking, lampshade, food products and oil products units. Over two-thirds of units want to

expand in wiremeshing, leather, handloom, carpentry, hubbrush, ring making and blacksmithy. But while most units in leather, handlooms, hubbrush and blacksmithy want relatively fast expansion, raising their output levels by at least 100 per cent, carpenters, wiremesh makers and ring makers want only moderate expansion, in most cases upto 50 per cent, during the next five years. In bamboo products and pottery the number of units desirous of expansion makes 50 to 60 per cent of the total, and expansion desired by them is mostly between 25 to 50 per cent.

What kind and order of resources would be required for the envisaged expansion? Obviously, all units desirous of expansion would be requiring additional raw material, although some units in certain industries using locally and generally freely, available material, such as pottery, and bamboo products have not mentioned it as a requirement of their expansion. Only 51 per cent of the units desiring expansion indicated that they would require working capital to finance their expansion. Thirty seven per cent of 'expanding' units would want additional machinery and equipment. Only a few considered land and building or marketing arrangements necessary for enabling them to expand. Working capital finance would be required by most expanding units in pottery, wiremeshing, handlooms, beadmaking, carpentry, hubbrush making and blacksmkty, but not by most in food products, matmaking and ring making. Most expanding units in wiremeshing, handloom, carpentry and ring making will require additional machinery and equipment.

What is the magnitude of financial requirements per unit, of the expansion desired by them? Except in case of food products and oil mills, the average per unit working capital requirements of expansion of the sample rural industry units do not exceed Rs.2000. In most cases, they are less than Rs.1000 per unit, the lowest being in matmaking at Rs.40, followed by bamboo products at Rs.90, lampshade at Rs.140, and pottery at Rs.309. Only in handloom, beadmaking, hubbrush and blacksmithy additional working capital required exceeds Rs.1000, but is within Rs.2000 per unit. Similarly, the financial requirements for procuring additional machinery and equipment required for expansion are less than Rs.1000 per unit in all cases except food products where it is Rs.3,25,000. Additional equipment would cost only Rs.20 in matmaking, Rs.30 in lampshade, Rs.42 in bamboo products, Rs.130 in blacksmithy and Rs.152 in carpentry. It will exceed Rs.500 but not Rs.1000 in case of wiremeshing and ring making units only.

Conclusion

The overall picture presented by the recent record of units in the sample industries, is one of the widespread stagnation and decline in their output, particularly in physical terms: only a few industries experienced an increase in the volume of their output in most of their units notable among them being hubbrush making, food products, beadmaking, rope and toys. Various pieces of available evidence suggests that it is not so much in the market as in the production related problems that the reasons for

stagnation are to be found. That the market did not pose the major problem is evidenced by the following three facts : One, growing units in all industries found market as a favourable factor in their performance, while only a small proportion of non-growing units considered market as an important reason for their sluggishness. Two, in all industries, the average price of product was well above the cost indicating that the market is favourable enough to yield a reasonably high realisation of value per unit of output. Three, not many entrepreneurs considered marketing arrangements as a necessary condition for effecting an expansion in their activities.

It is found that the major reason for stagnation in most rural industries consists in the difficulty of obtaining sufficient raw material. This problem seems to be growing more acute in the case of industries using locally available raw material, where even the availability of financial resources may not be of much help in ensuring supply of raw material as the sources of material themselves are getting exhausted. Availability of finance has also been a problem to some extent, but the fact that certain institutions have entered the area and initiated financing units in different rural industries suggests that this problem may gradually be overcome.

A kind of vicious circle, however, seems to be operating in the functioning and growth of the units in most industries. Operating on very small scale, they are able to turn out very small

volume of production, which despite a reasonably high value added per unit of output, provides only a small income per worker, which in turn restricts the capacity and enthusiasm of the entrepreneur households to expand. In order to break this circle it seems necessary to strengthen the units to be able to enlarge the scale of their operations, by providing them capital for meeting operational costs and also for additional tools and equipment where necessary. As is revealed by the responses of the entrepreneurs, the amounts of additional capital required for these purposes are generally small in most cases.

CHAPTER VI

Conclusion

A discussion on rural industries and rural industrialization generally tends to concentrate mainly on the traditional village crafts and activities ancillary to agriculture. In reality, however, the rural areas are found to have a much more diversified structure of industries than is generally presumed. No doubt, the traditional village industries and crafts continue to engage the major part of the rural industrial workforce, but a number of industrial activities which were not traditionally a part of the rural scene have emerged and started playing a significant role in the generation of employment and incomes in the rural areas. What is of greater significance to note is that most of these activities are found to prove more effective than the traditional ones, in providing remunerative employment and have also experienced a relatively better growth potential. The emerging pattern of industries and their relative performance, therefore, suggest that rural industrialisation could be a relatively more effective means for generation of growth and employment in the rural areas, by utilising the potential of the new industries, along with the traditional ones.

The non-traditional industries also seem capable of breaking the caste-industry nexus and reduce the rigidities of social stratification in the rural areas. Their entrepreneurs come

from a wider cross-section of rural society while the caste-industry identification has been more or less complete in the traditional industries. In fact, the growth of rural industries based primarily on traditional occupations may well accentuate the social distance among the caste groups, despite whatever betterment it may bring in the economic conditions of artisans and craftsmen. No doubt, even the non-traditional activities are found to exhibit concentration by social groups, though to a smaller extent than the traditional industries, but such concentration is primarily based on class distinction in terms of ownership of resources, rather than on the traditional caste-occupation association.

Most rural industries, however, are found to have limited capacity to generate even a subsistence income to those engaged in them and have also not shown very encouraging record of growth in the recent past. The problem is found to be particularly acute in the case of traditional industries. Among the industries covered in our study almost all traditional industries, pottery, bamboo basketry, leather, toys, rope and bidi making are hardly able to meet the criterion of providing minimum subsistence to the households engaged in them. Only blacksmithy, carpentry and handloom have shown a good promise in so far as value added per worker is high enough to provide a subsistence income to the workers and their dependents. The new industries wiremeshing, lampshade and hubbrush manufacturing meet the criterion easily;

and food and oil products, the two old industries but run on modern and larger scale, of course, are the only one exhibiting prosperity and affluence of their entrepreneurs.

The basic reason for the low income generating capacity is found to lie in their tiny size in terms of the physical volume of output they produce. Most units are run on a household basis, and do provide full employment to all the available household workers, but the technology and resources used in production enable them to produce only a small output. They are able to sell their output at a **price which** yields a reasonable margin of revenue over costs, but the total quantum of production itself is too small to yield a sufficiently high income to the households. The industries which have relatively a high turnover per unit, are also able to generate higher income per worker, irrespective of the number of persons employed and persondays of employment generated. Besides oil mills and food products, wiremeshing, handloom, hubbrush making, lampshade manufacture, blacksmithy and carpentry are found to be in this category.

But the growth performance even of industries showing better income potential has not been very encouraging. Only in hubbrush and carpentry most units have registered a growth in volume of output in recent years. It, however, looks that the affliction **with** which they have been suffering are of a

temporary nature : wiremesh and lampshades had a setback in the market primarily on account of inter-unit competition which was taken advantage of by the middlemen, at least in the case of wire-meshing. In blacksmithy availability of power in case of lock making units has been a problem. Yet the products these industries manufacture are likely to have a sustained and increasing demand and the supply of the raw materials used by them is also far from inelastic. The two traditional industries in this group, blacksmithy and carpentry are coping up with the decline in demand for their traditional products, by diversifying into the manufacture of certain new products with increasing demand. In leather, though shortage of raw material artificially created by an official measure, has caused a decline in production, the demand for the products of this industry can well be expected to be good and rising.

On the other hand, low income generating potential and poor growth performance of industries like bamboo basketry, pottery, toys and rope is the result of some of the inherent and inevitable constraints in their growth both in terms of demand and raw material. Income elasticity of demand for the products of these industries is negative after a level and the substitutes from the modern organised sector are bound to take their place. The supply of raw material, which mostly is a free gift of nature has already started posing problem, and likely to be more constrained with the passage of time. There is thus need to concentrate on the development of such of the traditional rural

industries which have a positive income elasticity of demand for their products, and therefore not faced with the danger of inevitable extinction; and also have the potential for technological flexibility necessary to cope up with changes in demand pattern. Blacksmithy, carpentry, handloom and leather products seem to fit quite well in this category. In order, however, that rural industrialisation becomes an effective tool for development of rural areas as well as for better integration of the rural and urban sectors, equal emphasis needs to be laid on the development of non-traditional industries in these areas. Many of them may not be linked with the rural areas in terms either of use of local material, or of having a local market, but would be effective in providing productive employment to rural labour.

With this brief resume of our findings and their implications in relation to the choice of product pattern for rural industrialisation, we now turn to the examination of some of the strategy alternatives discussed in the beginning of the study. The issues in the first chapter outlined the various aspects of an approach to rural industrialisation. We may now assess the suitability and desirability of the options in the light of the findings of the study.

The first issue relates to the treatment of rural industrialisation as an aspect of industrial location or as a programme primarily for the development of rural industries. It is made amply

clear from the findings and discussion in our study that a long run strategy of rural industrialisation would require not merely the development of existing rural industries, but also a programme of infusing increasingly larger component of the 'non-rural' industries in the rural areas. The questions of selection of industries offering the required locational flexibility and development pre-conditions for their location in the rural areas thus become the main planks of policy on rural industrialisation in this context. Promotion and development of the 'dynamic' rural industries, no doubt, needs emphasis, but in the interest of long term growth on a sustained basis rural industrialisation should also be looked upon as a part of the programme for locational decentralisation of industries.

A possible argument against this approach is that its major emphasis is on industrialisation as such rather than on rural development, as the new industries would neither use local material, nor cater to the needs of the rural people. It must, however, be noted that such industries would at least serve the main objective of providing incomes to the sections of rural population who have no resource ^{than} other/labour, by generating productive employment for them. As we have seen in the case of industries studied by us, employment in industries not necessarily linked with the rural resources and needs has been generally yielding better incomes than the ones closely linked with the rural economy. In any case, there are not many

industries which could be expected to have both forward and backward linkages within the area. Among industries which show promise with the use of local material, most have an urban market, and those providing for the local market often use non-local raw material.

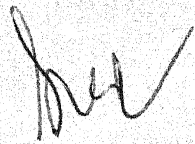
Further, it is important not only to generate a process of rapid development in the rural areas, but also to reduce the economic and technological gap between the rural and urban areas, and seek a greater degree of integration between the two. Emphasis on development of low technology, low productivity industries in the rural areas, along with the growth of modern high-technology industries in the urban areas, inevitably results in accentuating the technological and economic dualism between the two sectors. Therefore, the industries located in the rural areas should generate not only linkages, to the extent possible, in the villages, but also be a link in rural-urban integration. Besides reducing the income gap between the two sectors, it is also desirable that the rural industries use technologies which are in line with the technological pattern of emerging industrialisation in the country, as a whole. Upgradation of technologies of 'dynamic' rural industries and introduction of relatively modern-technology industries in the rural areas alone are likely to make the rural industrialisation an integral part of the industrialisation process of the country.

The choice of technology has to meet the criterion of 'appropriateness' not only in terms of the use of locally available material and manpower, but also in terms of generating reasonably high levels of incomes to the workers as well as of having capacity to meet the changing patterns of demand. Use of technologies which require a heavy labour input, but yield very low productivity per unit of labour is unlikely to serve the basic objectives of rural industrialisation. Technology used in rural industries varies in terms of use of machinery, equipment, non-human energy and, therefore, of capital intensity; but by and large the activities using mechanical devices and capital equipment only are found to be yielding a reasonable income to those engaged in them. At the same time, use of such devices and equipment does not turn these industries 'capital intensive' nor does it reduce employment potential. It only makes employment more effective in terms of income generation.

One of the reasons due to which the productivity and income aspects of rural industries tends to get less attention than employment creation as such, lies in the assumption that these industries are carried out as subsidiary activities by households with agriculture or some other activity as their main occupation; and, therefore, play the role only of reducing underemployment and supplementing the income from the major activity. In fact, however, this assumption is not found valid, the households and workers engaged in rural industries have them as their sole or

at least the main activity. Most of them do not even have another activity as a subsidiary occupation. These industries will, therefore, have to be seen as the effective means of providing full employment and sole source of income for those engaged in them. The need for industrial employment on a full time basis is likely to increase, as development of agriculture, even if rapid, will be able to absorb only a part of the increasing rural labour force and the rural labour scene is likely to be characterised by chronic unemployment rather than underemployment.

The rural industries which were earlier run solely on the household basis, are now found to have a part of them carried out on non-household basis using hired labour. This trend is likely to be stronger in future due to two reasons. Industries showing good potential are already in the hands of people owning some assets and resources, who are interested in them not as a subsistence activity but as profit making ventures. The expansion in such industries would increase the demand for wage labour. On the other hand, landless labourers with no assets and household activity, on the one hand, and workers from the households engaged in the declining traditional industries, would swell the ranks of workers seeking wage labour. From the viewpoint of earning a living also, a worker may prefer to have a reasonably well paid job in non-household unit rather than being self-employed in household unit with very low income and little prospects of growth. Rural industrial development is therefore, likely to have a



gradual but inevitable shift from the subsistence to the capitalist mode of production. Whether such a change is desirable or not from the overall socio-political viewpoint is a matter that can be debated. It is, however, evident that even the production on household basis will have to depend increasingly on the wider, non-household network and institutions for its viability and growth; for, functions relating to procurement of material, necessary technological refurbishment and marketing of the expanding product would become increasingly difficult for households to carry out individually. Continuation of household basis of production in the lines where technology permits it, could, therefore, be sustained if the producers came together, on a cooperative basis for carrying out these functions.

The type of strategy suggested by the preceding discussion of our findings would require, a break from the rather restrictive approach to rural industrialisation adopted in the formulation of policies and programmes so far. First, the scope of promotional measures undertaken for the development of rural industries would need to be extended to all the industries located in the rural areas, and not confined to the specified village industries and crafts only. Second, the measures emphasising mainly the creation of a protected market need to be at least equally matched by efforts to raise productivity, even if it implies technological changes and increase in capital intensity of these industries. Third, strengthening the productive potential of existing

units needs to be given precedence over the efforts to multiply the number of units, in order to ensure that rural industrialisation does not only result in the creation of a larger amount of spurious employment, without providing at least the subsistence income to workers. Finally, it must be noted that the protective and promotional measures should aim at increasing growth potential rather than mere survival of rural industrial units. An approach mainly relying on subsidy and assistance on individual basis may help them to survive but will not enable them to grow. It is necessary, therefore, that emphasis is laid on 'planning' for development of industries in the rural areas giving up the almost exclusive reliance so far placed on the 'assistance' approach.

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